YEAR BOOK AUSTRALIA 1984

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YEAR BOOK AUSTRALIA

Cover: Wattle (*Acacia cultriformis*)
Photograph courtesy of M. Fagg, National Botanic Gardens, Canberra

(Front endpaper): Construction of Australia's New Parliament House, Canberra, to be completed in 1988

(Back endpaper): Artist's impression of new House of Representatives chamber

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R. J. CAMERON

AUSTRALIAN STATISTICIAN

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GENERAL INFORMATION

Symbols

The following *symbols*, where shown in columns of figures or elsewhere in tables mean:

n.a.	not available
n.y.a.	not yet available
—	nil or rounded to zero
..	not applicable
n.p.	not available for separate publication (but included in totals where applicable)
p	preliminary—figure or series subject to revision
r	figures or series revised since previous issue
n.e.i.	not elsewhere included
n.e.c.	not elsewhere classified
———	break in continuity of series (where drawn across a column between two consecutive figures)
	m.—males; f.—females; p.—persons.

Other forms of usage

The following *abbreviations* are used for the titles of the Australian States and Territories and Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), S.A. (South Australia), W.A. (Western Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), Aust. (Australia).

In general, the *statistics in this volume relate to the States and Territories of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 27, The Territories of Australia. A few series elsewhere include particulars of Papua New Guinea because of the nature of the subject-matter; these series are indicated.

Yearly periods shown as e.g. 1982 refer to the year ended 31 December 1982; those shown as e.g. 1981–82 refer to the year ended 30 June 1982. Other yearly periods are specifically indicated. The range of years shown in table heading, e.g. 1901 to 1981–82, indicates the period covered, but does not necessarily imply that each intervening year is included.

Values are shown in Australian dollars ($ or $A) or cents (c) unless another currency is specified.

Catalogue numbers. Throughout this book references are made to ABS publications. In each case the catalogue number is shown in brackets; this should be quoted when ordering these publications (*see* below).

Where figures have been rounded, *discrepancies may occur between sums of the component items and totals*.

Availability of ABS publications

Information regarding the availability of ABS publications can be obtained from the Information Services Section, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T. 2616, Australia, phone (062) 52 6627, or from ABS offices in any capital city in Australia.

A complete list of ABS publications produced in Canberra and in each of the State Offices is contained in the ABS *Catalogue of Publications, Australia* (1101.0) which is available free of charge from any ABS office.

In some cases, the ABS can also make available information which is not published. This information may be made available in one or more of the following forms: microfiche, photocopy, data tape, computer printout, clerically—extracted tabulation. Generally, a charge is made for providing unpublished information. Inquiries may be made by contacting Information Services in the nearest ABS office.

FEATURES OF THIS ISSUE

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  Australia's New Parliament House, Canberra (pages 51–52)
  Australian Institute of Sport (pages 684–6)

- A selection of colour photographs of Australian art forms from the Australian National Gallery (facing page 670)

- Black and white photographs (facing page 126) of—
  Foundation stone laying ceremony, new Parliament House, Canberra on 5 October 1983
  The yacht Australia II competing in the America's Cup, September 1983
  Australia's fastest train, the XPT
  Dust storm blanketing Melbourne, February 1983
  New $1 coin
  New $100 note

- Details of the new Medicare Health Scheme (Chapter 10, pages 190–1)

- New sections on 'Development in Education' and 'Teacher Education', etc. (Chapter 12, pages 225–6)

- Endpapers depicting Australia's new Parliament House, Canberra

- Fold out, coloured general reference map of Australia inside back cover

PREFACE

The Year Book is the principal reference work produced by the Central Office of the Australian Bureau of Statistics (ABS). It provides a comprehensive and detailed statistical review of all aspects of the economy and social conditions of Australia. In addition, it contains descriptive matter dealing with Australia's history, geography, physiography, climate and meteorology, government, defence, and repatriation services and international relations.

This is the sixty-eighth Year Book issued under the authority of the Commonwealth Government (the first Year Book was published early in 1908) and follows a similar pattern to previous editions. Some of the chapters have been extensively revised, new material has been added and a number of new features have been introduced.

The various chapters of the Year Book contain references to special articles, background material and items of historic interest which have appeared in previous issues.

Most of the statistics contained in this volume relate to the years ended June or December 1982 or 1983. More detailed, and in many cases more recent, statistics dealt with in the Year Book are available in other ABS publications. These publications are listed in the ABS Catalogue of Publications, Australia (1101.0).

My thanks are tendered to the responsible officers of the various Commonwealth and State Departments and Organisations who have kindly supplied material for the preparation of the Year Book.

R. J. CAMERON
Australian Statistician

Australian Bureau of Statistics
Canberra, A.C.T. 2600
April 1984

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The Bureau would like to thank the following institutions who either supplied basic material for the various articles or advised on their preparation:

CHAPTER TWO:

CLIMATE AND PHYSICAL GEOGRAPHY
Bureau of Meteorology, Melbourne

CHAPTER THREE:

GENERAL GOVERNMENT
Attorney-General's Department
Australian Electoral Office
Department of the Prime Minister and Cabinet
Department of Administrative Services
Parliament House Construction Authority

CHAPTER FOUR:

DEFENCE
Department of Defence
Department of Defence Support

CHAPTER FIVE:

INTERNATIONAL RELATIONS
Department of Foreign Affairs

CHAPTER SEVEN:

PRICES
Petroleum Products Pricing Authority

CHAPTER NINE:

SOCIAL SECURITY AND WELFARE
Department of Social Security
Department of Veterans' Affairs

CHAPTER TEN:

HEALTH
Capital Territory Health Commission
Department of Health
Department of Veterans' Affairs
Services and Investment Ltd (Cremation Society of Australia, ACT Ltd)

CHAPTER ELEVEN:

LAW AND ORDER
Australian Institute of Criminology
Australian Law Reform Commission
Attorney-General's Department

CHAPTER TWELVE:

EDUCATION
Department of Education
Commonwealth Tertiary Education Commission

CHAPTER THIRTEEN:

AGRICULTURAL INDUSTRIES
Australian Dairy Co-operation
Australian Egg Board
Australian Meat and Livestock Corporation
Australian Wheat Board
Australian Wool Corporation
Bureau of Agricultural Economics
Bureau of Meteorology
Department of Primary Industry

CHAPTER FOURTEEN:

FORESTRY AND FISHING
Commonwealth Scientific, Industrial and Research Organisation (CSIRO)
Fisheries Division, Department of Primary Industry
Forestry Branch, Department of Primary Industry

CHAPTER FIFTEEN:

WATER RESOURCES
CSIRO—Science Liaison Branch
Department of Resources and Energy
Department of Transport and Works, Darwin
Dumoresq—Barnon Rivers Commission, Brisbane
Engineering and Water Supply Department, Adelaide
NSW Water Resources Commission
Public Works Department, Perth
Queensland Water Resources Commission
River Murray Commission
State Rivers and Water Supply Commission of Victoria

CHAPTER SIXTEEN:

MINERAL INDUSTRIES
Australian Mineral Development Laboratories (AMDL)
Commissioner for Taxation
Department of Business and Consumer Affairs—Bureau of Customs

CHAPTER SEVENTEEN:

MANUFACTURING AND INTERNAL TRADE

Bureau of Industry Economics
Commonwealth Scientific, Industrial Research Organization (CSIRO)
National Standards Commission
Standards Association of Australia

CHAPTER EIGHTEEN:

ENERGY

Commonwealth Scientific, Industrial and Research Organization (CSRIO)
Department of Resources and Energy
Department of Trade

CHAPTER NINETEEN:

HOUSING AND CONSTRUCTION

Defence Services Homes Corporation
Department of Housing and Construction
Department of Territories and Local Government

CHAPTER TWENTY:

TRANSPORT AND COMMUNICATION

Australia Post
Australian Broadcasting Corporation
Australian Broadcasting Tribunal
Australian Road Research Board
Department of Aviation
Department of Communications
Department of Industrial Relations
Department of Industry and Commerce
Department of Transport
National Association of Australian State Road Authorities
Overseas Telecommunication Commission (Australia)
Telecom Australia

CHAPTER TWENTY-ONE:

PRIVATE FINANCE

Life Insurance Commission
Reserve Bank of Australia

CHAPTER TWENTY-TWO:

PUBLIC FINANCE

Australian Taxation Office
Department of Primary Industry

CHAPTER TWENTY-FIVE:

SCIENCE AND TECHNOLOGY

Commonwealth Scientific, Industrial and Research Organization (CSRIO)
Department of Science and Technology

CHAPTER TWENTY-SIX:

NATIONAL ESTATE, CULTURE, RECREATION AND TRAVEL

Australia Council
Department of Sport, Recreation and Tourism
Department of Territories and Local Government
Australian Institute of Sport

CHAPTER TWENTY-SEVEN:

THE TERRITORIES

ACT Schools Authority
Department of Territories and Local Government

CHAPTER 1

FROM PRE-HISTORY TO FEDERATION

Early knowledge and discovery of Australia

Pre-history

Humans entered the Australian continent from the South-East Asian area during the last glaciation at least 40,000 years ago, when sea levels were lower than in recent times. Nevertheless, these first migrations would have entailed sea voyages of at least some 60 kilometres. Settlement was well established at least 25,000 to 30,000 years ago, and by 20,000 years ago almost all the continent was inhabited.

The original Australians lived as hunters and gatherers, using tools of wood, bone, shell and stone. The archaelogical evidence indicates that originally there was a simple, pan-continental toolmaking tradition characterised by stone core tools and scrapers used to make further tools of wood. This tradition persisted until 5,000 to 6,000 years ago, when a series of new influences became apparent. A range of more specialised and sophisticated small tools was added to the old technology. The dingo, the only animal domesticated by the Aboriginals, also entered the continent at this time. These new influences never reached Tasmania, isolated for some 12,000 years by the post-glacial rising seas, where Tasmanian Aboriginals maintained the culture of the late Pleistocene period until the European settlement of the island.

Population levels had apparently increased about 5,000 years before European settlement, and estimates of the number of Aborigines in Australia in 1788 vary from 250,000 to 1,500,000 million. They were divided into some 500 small groups, speaking a variety of languages and dialects. These 'tribes' were further divided into 'bands'—families or clusters of family groups—which formed the basic self-sufficient economic unit. These groups were linked through a complex kinship system. Labour was divided between the sexes: the men hunted while the women foraged for the roots, seeds and small animals which formed a basic part of their diet. When abundant food or water supplies were available, or when ceremonial obligations demanded, local groups would congregate . Ceremonial and other exchanges of goods at these gatherings led to their wide dispersal. Religious and ceremonial activities related to the land were a vital part of Aboriginal life. There is evidence that they had developed the use of ochre as a ritual painting material as early as 25,000 years ago, while some forms of ritual burial was also practised at this time.

The barriers of distance and the aridity of much of Australia were cause in part of the cultural and linguistic diversity of its people. European exploration and settlement was for most Aboriginal societies their first contact with an outside culture. The impact of this settlement led rapidly to the disappearance of the traditional Aboriginal way of life in those areas where the colonists established themselves.

Terra Australis

Although references to an Austral land are found in the works of writers in the early centuries after Christ, and evidence appears in maps, globes, and manuscripts from the Middle Ages onward, there is no definite evidence connecting this so-called *Terra Australis* with Australia. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria.

Early discoveries of Australia

The Portuguese may have discovered part of the Australian coast before 1542, and it has been suggested that the Arabs may have come to Australia even earlier, though there is no evidence to support this theory. For all practical purposes, however, the coastal exploration of Australia may be taken as having begun with the Spaniards and the Dutch.

Discoveries by the Spanish

In 1606 the Spaniard, Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south and therefore named the group *La Australia del Spiritu Santo.* After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian continent, although no mention of it is made in his records.

Discoveries by the Dutch

A map published by Cornelius Wytfliet in 1597 had indicated roughly the eastern and western coast of Australia, as well as the Gulf of Carpentaria.

The Dutch first explored the coast of Australia when, during 1606, the yacht *Duyfken* having coasted along the southern shores of New Guinea, followed the west coast of Cape York Peninsula as far as Cape Keer-Weer (Turn Again). Subsequent visits were made by Hartog (1616), de Houtman (1619), Carstensz (1623), Thijssen (1627), Pelsaert (1629), Tasman (1642) and others, so that by 1644 the Dutch had discovered and explored the Australian coast from Fowler's Bay in the South to the tip of Cape York Peninsula, as well as the south of Tasmania.

More detailed notes on discoveries by the Dutch can be found in Year Book No. 63.

Discoveries by the English

In the meantime, the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier as supercargo of the *Cygnet*, a trading vessel whose crew had turned buccaneers. In 1699 he again visited Australia in command of H.M.S. *Roebuck* and, on his return to England, published an account in which a description was given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

At the end of the seventeenth century it was uncertain whether Tasmania and New Zealand were parts of Australia or whether they were separated from it but themselves formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though undertaken primarily for the purpose of observing from Tahiti the transit of Venus, had also the objective of ascertaining whether the unexplored part of the southern hemisphere was only an immense mass of water or whether it contained another continent. In command of H.M.S. *Endeavour*, and accompanied by botanist Sir Joseph Banks, naturalist Dr Daniel Solander, astronomer Charles Green, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the neighbourhood of Poverty Bay.

On 20 April 1770, Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, on 29 April 1770 he discovered Botany Bay, where he landed. Cook sailed along the coast in a northerly direction for nearly 2,100 kilometres until 11 June 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, through Torres Strait.

More detailed notes on Cook's voyages can be found in Year Book No. 63.

The annexation of Australia

Possession taken of eastern coast of Australia by Captain Cook

On 22 August 1770, the history of Australia was brought into definite political connection with western civilisation when Captain Cook took possession 'of the whole eastern coast, from latitude 38°S, to this place, latitude 10½°S, in right of His Majesty King George the Third', i.e. over only what now is Victoria, the eastern parts of New South Wales and Queensland.

Annexation of eastern part of Australian continent and Tasmania

Formal possession on behalf of the British Crown of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26 January 1788, when Captain Phillip's commission, first issued to him on 12 October 1786 and amplified on 2 April 1787, was read to the people whom he had brought with him in the 'First Fleet'. The commission appointed Phillip 'Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south'.

By the middle of 1829, the whole territory, now known as Australia, had been constituted a dependency of the United Kingdom.

For more detailed notes on the annexation of Australia, *see* Year Book No. 63.

The exploration of Australia

Early exploration

From 1788, when Governor Phillip established his colony on the shores of Port Jackson, expeditions began to explore the immediate area of settlement in search of good farming land. Among suitable locations discovered were those just above the head of navigation of the Parramatta River, where the settlement of Rose Hill (later Parramatta) was established in November 1788, and the alluvial flats of the Hawkesbury River, which were explored in 1789.

Other minor exploratory journeys in the 1790s and early 1800s included John Wilson's two investigations of various parts of the Southern Highlands of New South Wales, Lieutenant John Shortland's discovery of the Hunter River (and the future site of Newcastle), and expeditions by Henry Hacking (1794), George Bass (1796), Francis Barrallier (1802) and George Caley (1804) to penetrate the mountain foothills west of the Nepean River.

By the end of the first two decades of colonisation, settlement stretched along the east coast from the Hawkesbury River to the cedar forests of Illawarra, but for barely 65 kilometres inland, where it was compacted by the seemingly impenetrable barrier presented by the Blue Mountains.

The encumberment on the existing land persisted until 1813, when Gregory Blaxland, Lieutenant William Lawson and William Charles Wentworth succeeded in finding a route through the mountain range, thereby allowing the later exploratory parties of George William Evans (1813 and 1815), John Oxley (1817 and 1818), Allan Cunningham (1823 and 1827), Hamilton Hume and William Hovell (1824) and others to open the way for expansion from Port Phillip in the south to the Darling Downs in the north.

Exploring the eastern rivers and to the south

Between 1828 and 1841, exploration of south-eastern Australia was concerned mainly with establishing whether or not there was a large river system emptying into the sea on the south coast.

Between late 1828 and early 1829, an expedition led by Charles Sturt followed the Macquarie River to its meeting with the Darling River and explored part of the Castlereagh River. On his next expedition, in 1830, Sturt pieced together more of the network of waterways which make up the Murray-Darling system by following the Murrumbidgee River from Jugiong down to the river's meeting with the Murray, which he followed as far as Lake Alexandrina and Encounter Bay on the southern coastline. Three years later, Sturt completed his exploration of the Murray by investigating its upper reaches.

Meanwhile, Captain John MacArthur and others had discovered that merino sheep were naturally suited to the dry climate of the interior. The colony's wool industry flourished and, by 1831, 1,340,000 kilograms of fine wool was being exported annually. As a result of the wool boom, settlers became anxious to push further into the interior in search of new pastures.

During three expeditions between 1831 and 1836, Thomas Livingstone Mitchell explored north of the Liverpool Plains and discovered the Macintyre River; discovered well-grassed country at the junction of the Darling and Bogan Rivers; and explored the Lachlan River to its meeting with the Murrumbidgee River, the Murray to its meeting with the Darling River, and south and south-east of the Murray through the region he called 'Australia Felix' to Discovery Bay on the southern coast.

Gradually, the push south continued. In 1838, Angus McMillan discovered a practicable route from Monaro to the southern coastline, and, in 1840, Paul Edmund de Strzelecki made a journey from the Murrumbidgee River south to Melbourne, during which he discovered and named Mount Kosciusko.

Exploring the south

By the mid-to late-1830s, all south-eastern Australia up to the present Queensland border had been explored and was sparsely settled.

In 1831, Captain Collet Barker landed at what was to become Port Adelaide and, by the late thirties, cattle-droving journeys undertaken by Joseph Hawdon, Charles Bonney, Charles Sturt and E. J. Eyre had established links between the settlement of Adelaide and the settlements in the east.

In August 1844, Charles Sturt led a sixteen-man expedition from Adelaide into the interior with instructions to investigate a theory that there was an inland sea. After much hardship and near disaster during what was a period of exceptional heat and drought in the region, Sturt found the channels of Cooper's Creek, part of the inland river system of Queensland, dispersed among grassy plains. However, with the waters drying up rapidly in the November (1845) heat and his health deteriorating, Sturt was forced to retreat, declaring the land to be worthless.

Exploring north-eastern Australia

In 1844–45, Ludwig Leichhardt left Jimbour Station on the Darling Downs to lead an expedition on an epic 14½ month, 4,800 kilometre journey north and north-west to Port Essington, thereby winning a reputation for opening up large tracts of rich land. In 1848, however, he and his party disappeared without trace while on another expedition attempting to cross the continent to Perth. Paradoxically much valuable incidental exploration was carried out by a number of search parties.

Meanwhile, Thomas Mitchell's fourth expedition, in 1846, had failed in its objective of finding a river which flowed to the northern coast, but led to the opening up of good pastoral country in the Maranoa and Barcoo Rivers regions.

In 1848, E. B. Kennedy was speared to death by local Aboriginals while exploring the interior of Cape York Peninsula from Rockingham Bay to the Cape.

In the mid-to late-1850s, Angus C. Gregory led two expeditions: one, in 1855–56, across northern Australia in a west-east direction from the mouth of the Victoria River to the east coast at Port Curtis; and the other, in 1858, from the Barcoo River south to Adelaide.

Exploration of what was by then the new colony of Queensland was continued through the 1860s and 1870s by George Dalrymple, Ernest Henry, the Macdonald brothers, William Hann, James Venture Mulligan, R. L. Jack and others, which led to the founding of such towns as Bowen, Rockhampton and Mackay, and the opening up of much valuable farming land.

Across the continent south to north

In the late 1850s and early 1860s, most exploratory interest was concentrated on Central Australia, especially after April 1860, when John McDouall Stuart raised a Union Jack on what he considered to be the geographic centre of the continent, Central Mount Stuart. The South Australian Government offered a large reward to the first explorer to cross Australia from south to north.

In August 1860, Robert O'Hara Burke and W. J. Wills set out from Melbourne with a large party to take up the challenge. On 11 February 1861, four expedition members (Burke, Wills, John King and Charles Gray) reached a mangrove swamp on what appeared to be the coast at the Gulf of Carpentaria (though they could not see the sea). After a succession of sorry incidents, however, Burke, Wills and Gray died of exposure and starvation on the return journey.

As in the case of Leichhardt, search parties sent out after Burke and Wills discovered much valuable land in their own right: John McKinlay led an expedition from Adelaide to the north-east; William Landsborough from the Gulf of Carpentaria southward; and Frederick Walker from Rockhampton to the west.

Meanwhile, John McDouall Stuart had set out from Adelaide on his own expedition across Australia and, in July 1862, reached the sea at Van Diemen Gulf.

Exploring the west

As early as 1697, Willem de Vlamingh of the Dutch ship *Geelvinck* had carried out limited inland exploration on the west coast of Australia in the vicinity of what he named the Swan River. However, the first major inland exploration in the colony of Western Australia took place 130 years later when, in 1827, Edmund Lockyer explored the watershed of the Kalgan River to within about 60 kilometres of its mouth.

In the 1830s, exploration and settlement was mainly to the south of Perth (founded in 1829), although, as the soil grew richer, dense hardwood forests made land-clearing difficult. Among the explorers during this decade were Ensign Robert Dale, who found the rich agricultural land of the Avon Valley (1830); Lieutenant H. W. Bunbury, who opened the way to rich pastoral flats in the south-west (1836); and Captain George Grey, who discovered the rich hinterland that now serves Geraldton (1839).

During the 1840s, J. S. Roe, who had also conducted several exploratory journeys during the 1830s, discovered good grazing country while on a 2,900 kilometre York-Pallinup River-Russell Range-Bunbury-Perth trek (1848).

In the 1850s and 1860s, the south-west was extensively occupied as far south as Albany and Kojonup, while to the north the Greenough district quickly became the principal wheat-producing region.

Due largely to the efforts of Grey in the 1830s, the Gregory brothers in the 1840s, 1850s and 1860s, and the Forrest brothers in the 1860s and 1870s, pastoralists were able gradually to push further north to occupy the Murchison, Gascoyne and De Grey districts. By the 1880s, again due largely to exploration by the Forrest brothers, even the Kimberley region was being settled.

Meanwhile, journeys to, or in, the east and south-east of Western Australia by E. J. Eyre (1841), E. A. Delisser (1861), John Forrest (1870) and others had gradually filled in many 'blanks' in those directions also.

Exploring the hinterland

In 1875, Ernest Giles set out from Beltana, South Australia, and made a 4,000 kilometre journey to Perth. Two years previous, two other parties, led by Peter Egerton Warburton and W. C. Gosse respectively, had explored west from the MacDonnell Ranges to the Oakover River, and from Alice Springs to Perth.

Exploration of the hinterland was continued by W. P. Goddard (1890), J. H. Rowe (1895), A. W. Canning (1906) and others into the early twentieth century.

Exploring Tasmania

In 1793, Lieutenant John Hayes, commander of the *Duke of Clarence*, sailed up the Derwent River to become the first explorer to journey more than a few kilometres inland from the coast of Van Diemen's Land (by which name Tasmania was known until 1856). Then, as always, the island's rugged topography hindered any extensive exploration, and it was not until 1807 that Lieutenant Thomas Laycock crossed the island from Port Dalrymple to Hobart.

Much early exploration was carried out either with the encouragement of Lieutenant-Governor William Sorell (including expeditions aimed primarily at discovering the nature of the west coast and determining its suitability for a future penal settlement), or under the auspices of the Van Diemen's Land Company (which fostered efforts to find land suitable for agricultural settlement).

Some of the most noteworthy of Tasmania's early explorers were official surveyors, including John Oxley, G. W. Evans and Thomas Scott who, between 1820 and 1837, examined parts of the east, north-west and west coasts and, no doubt, influenced decisions to establish the infamous penal settlements at Macquarie Harbour (in 1822) and Port Arthur (in 1830).

Between the late 1820s and early 1840s a considerable amount of incidental exploration resulted both from expeditions to round up the remaining Tasmanian Aboriginals following the declaration of martial law against them in 1828; and from the personal encouragement by Lieutenant-Governor Sir John Franklin of scientific expeditions to Tasmania in the late 1830s and early 1840s.

In the 1840s and 1850s, licensed surveyor N. L. Kentish was responsible for opening up the rich pastoral areas between the north-west coast and the first high mountains, while Assistant-Surveyor James Scott explored much of the north-east.

The 1860s and 1870s were marked by a number of exploratory journeys in search of minerals, including those of Charles Gould (1862), who found traces of silver, lead and gold in the Franklin and Gordon Valleys; James Smith (1871), who discovered tin at Mt. Bischoff, destined to become the richest mine of its kind in the world; and C. P. Sprent (1876-77), who found gold, copper, osmiridium and platinum while prospecting between the Arthur and Pieman Rivers.

The establishment of the Commonwealth of Australia

Federation

On 1 January 1901, the colonies, with the exception of New Zealand (*see* Year Book No. 63, page 5), were federated under the name of the 'Commonwealth of Australia', the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—being at the same time changed to that of 'States'.

Transfer of the Northern Territory to the Commonwealth

On 7 December 1907, the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act, 1907 and by the Commonwealth Parliament under the *Northern Territory Acceptance Act* 1910. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

By Imperial Order in Council dated 23 July 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth on 10 May 1934, in the *Ashmore and Cartier Islands Acceptance Act* 1933, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July 1938 annexed the islands to the Northern Territory, whose laws, ordinances, and regulations, wherever applicable, thereupon applied. On the attainment of self-government by the Northern Territory on 1 July 1978, the Territory of Ashmore and Cartier Islands was retained as Commonwealth Territory.

The area of Ashmore Reef is approximately 150 square kilometres (to the limit of the reef), and it is situated 350 kilometres off the western coast of Australia and 850 kilometres west of Darwin. Cartier Island is approximately 9 square kilometres in area (to the limit of the reef), and is situated 290 kilometres off the western coast of Australia and 790 kilometres west of Darwin.

Transfer of the Australian Capital Territory to the Commonwealth

On 18 October 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 2,359 square kilometres as the Seat of Government of the Commonwealth. In December 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5 December 1910 a proclamation was issued vesting the territory in the Commonwealth on and from 1 January 1911. By the *Jervis Bay Territory Acceptance Act* 1915, an area of 73 square kilometres at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth and was transferred as from 4 September 1915.

Present composition of Australia

In 1973, the total area of Australia and of the individual States and Territories was determined by the Division of National Mapping as 7,682,300 square kilometres. Some historical dates and the present areas of the several States and Territories and of Australia are shown below. For detailed notes on the creation of the several colonies, *see* Year Book No. 63, pages 4–5.

AUSTRALIA: COMPONENT STATES AND TERRITORIES

State or Territory	*Year of annexation*	*Year of first permanent settlement*	*Year of formation into separate Colony or Territory*	*Year in which responsible government was granted*	*Present area in km²*
New South Wales	1770	1788	1786	1855	801,600
Victoria	1770	1834	1851	1855	227,600
Queensland	1770	1824	1859	(*a*) 1859	1,727,200
South Australia	1788	1836	1834	1856	984,000
Western Australia	1829	1829	1829	1890	2,525,000
Tasmania	1788	1803	1825	1855	67,800
Northern Territory	..	..	(*b*) 1863	..	1,346,200
Australian Capital Territory	..	..	(*c*) 1911	..	2,400
Australia	..	..	..	(*d*)	**7,682,300**

(*a*) As part of New South Wales in 1855; as a separate colony in 1859. (*b*) Previously part of New South Wales; brought under the jurisdiction of South Australia in 1863; transferred to the Commonwealth in 1911. (*c*) Previously part of New South Wales. (*d*) Constituted as from 1 January 1901.

The external Territories of Australia

More detailed information on Australia's external Territories can be found in Chapter 27, The Territories of Australia.

Norfolk Island

In 1856, Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony, and finally, by the passage of the *Norfolk Island Act* 1913, it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 02′ S., longitude 167° 57′ E., and comprises an area approximately 36 square kilometres.

Australian Antarctic Territory

An Imperial Order in Council of 7 February 1933 placed under Australian authority 'all the islands and territories other than Adelie Land which are situated south of the 60° S. latitude and lying between the 160° E. longitude and the 45° E. longitude'.

The Order came into force with a proclamation issued by the Governor-General on 24 August 1936, after the passing of the *Australian Antarctic Territory Acceptance Act* 1933 by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a French Decree of 1 April 1938 as latitude 60° S., longitude 136° E., and longitude 142° E.

Heard and McDonald Islands

Heard Island and the McDonald Islands, all about 4,100 kilometres south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26 December 1947. Heard Island is approximately 43 kilometres long and 20 kilometres wide, while the McDonald Islands, about 43 kilometres to the west of Heard Island, are small rocky and precipitous.

Cocos (Keeling) Islands

The *Cocos (Keeling) Islands Act* 1955 provided for the acceptance of the Cocos Islands as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts, Her Majesty, by Order in Council, specified 23 November 1955 as the date of transfer. From that date the islands came under Australian administration. Day-to-day affairs in the Territory are managed by an Administrator under delegation from the Minister for Home Affairs. The 27 coral islands of the territory have an area of about 14 square kilometres, and are situated in the Indian Ocean in latitude 12° 05′ S. and longitude 96° 53′ E.

Christmas Island

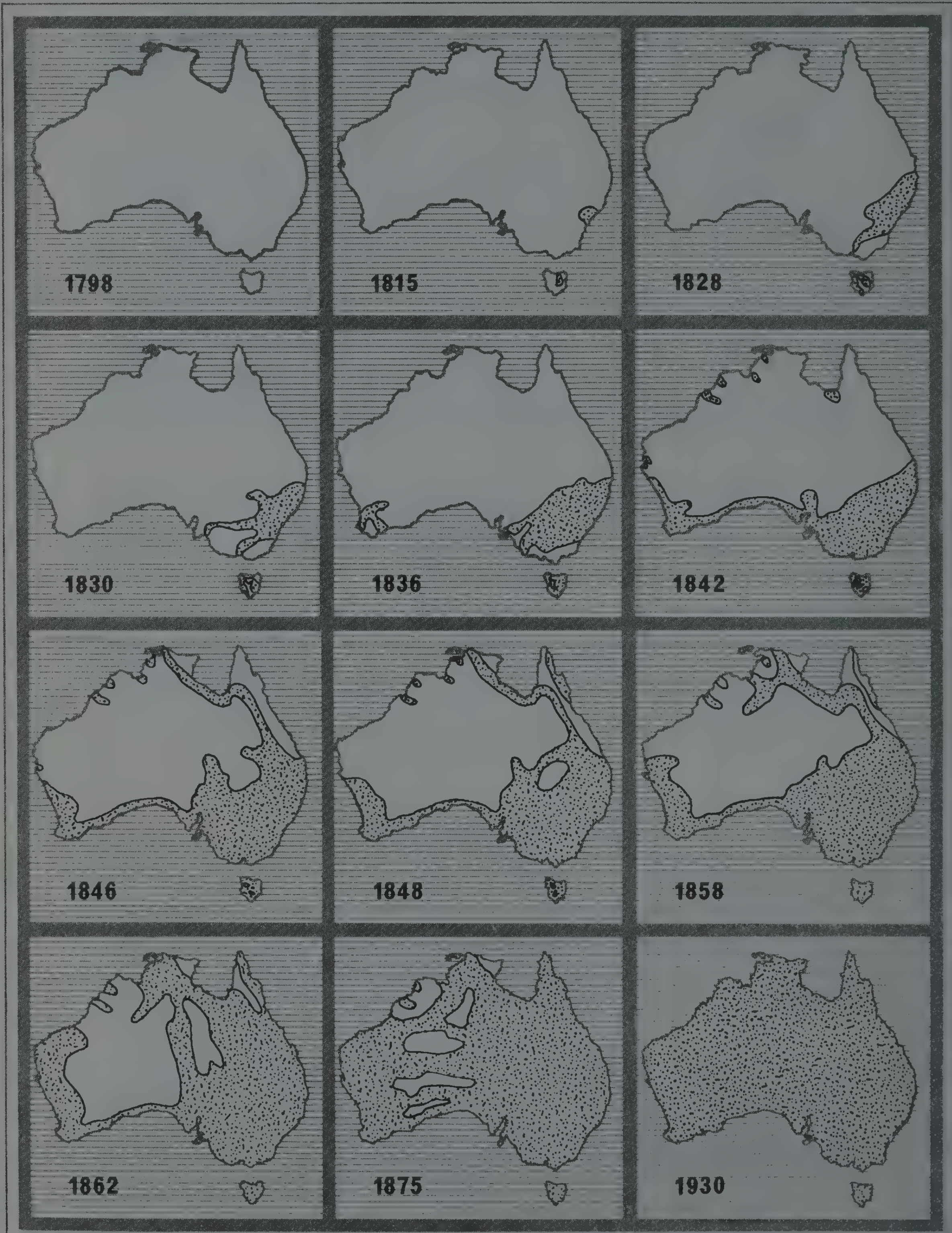
The *Christmas Island Act* 1958 provided for the acceptance of Christmas Island as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1 October 1958. Day-to-day affairs in the Territory are managed by an Administrator under delegation from the Minister for Home Affairs. The area of the island is about 135 square kilometres and it is situated in the Indian Ocean in latitude 10° 25′ S. and longitude 105° 40′ E.

Coral Sea Islands

The Coral Sea Islands were declared to be a Territory of the Commonwealth of Australia by the *Coral Sea Islands Act* 1969. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of about 1 million square kilometres with only a few square kilometres of actual land area, between the Great Barrier Reef, latitude 12° S. and longitude 157° 10′ E. The Minister for Home Affairs is responsible for matters affecting the Territory.

The Constitution of the Commonwealth of Australia

Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the federal movement in Australia, was embodied in this chapter in earlier issues of the Year Book. A complete copy of the revised Constitution is included in Year Book No. 67, pages 2-22.


1798
1815
1828
1830
1836
1842
1846
1848
1858
1862
1875
1930

This map series shows the work of the explorers at various significant times in Australia's history.

PLATE 1

CHAPTER 2

CLIMATE AND PHYSICAL GEOGRAPHY OF AUSTRALIA

General description of Australia

This chapter has been prepared by the Bureau of Meteorology, Department of Science and Technology. It is mainly concerned with the climate of Australia, although some geographic comparisons and a summary of landform features influencing climate have been included together with a summary of atmospheric climate controls.

Position and area

Position. Australia, including Tasmania, comprises a land area of 7,682,300 square kilometres. The land lies between latitudes 10° 41 'S. (Cape York) and 43° 39 'S. (South Cape, Tasmania) and between longitudes 113° 09 'E. (Steep Point) and 153° 39 'E. (Cape Byron). The most southerly point on the mainland is South Point (Wilson's Promontory) 39° 08 'S. The latitudinal distance between Cape York and South Point, Wilson's Promontory (South East Cape, Tasmania) is about 3,180 kilometres (3,680 kilometres) respectively and the longitudinal distance between Steep Point and Cape Byron is about 4,000 kilometres.

Area of Australia compared with areas of other countries. The area of Australia is almost as great as that of the United States of America (excluding Alaska), about 50 per cent greater than Europe (excluding U.S.S.R.) and 32 times greater than the United Kingdom. The following table shows the area of Australia in relation to areas of other continents and selected countries.

AREAS OF CONTINENTS AND SELECTED COUNTRIES

('000 square kilometres)

Country	*Area*	*Country*	*Area*
Continental divisions—		Country—	
Europe (*a*)	4,936	Australia	7,682
Asia (*a*)	27,532	Brazil	8,512
U.S.S.R. (Europe and Asia)	22,402	Canada	9,976
Africa	30,319	China	9,590
North and Central America and West Indies	24,247	Germany, Federal Republic of	248
South America	17,834	India	3,288
Oceania	8,504	Indonesia	1,919
		Japan	372
		Papua New Guinea	462
		New Zealand	269
		United Kindom	244
		United States of America (*b*)	9,363
Total, World excluding Arctic and Antarctic continents	**135,771**		

(*a*) Excludes U.S.S.R., shown below. (*b*) Includes Hawaii and Alaska.

Land forms

The average altitude of the surface of the Australian land mass is only about 300 metres. Approximately 87 per cent of the total land mass is less than 500 metres and 99.5 per cent is less than 1,000 metres. The highest point is Mount Kosciusko (2,228 metres) and the lowest point is Lake Eyre (–15 metres).

Australia has three major landform features: the western plateau, the interior lowlands and the eastern uplands. The western half of the continent consists of a great plateau of altitude 300 to 600 metres. The interior lowlands include the channel country of southwest Queensland (drainage to Lake Eyre) and the Murray-Darling system to the south. The eastern uplands consist of a broad belt of varied width extending from north Queensland to Tasmania and consisting largely of tablelands, ranges and ridges with only limited mountain areas above 1,000 metres.

The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the rivers of the northern part of the east coast, the longest are the Burdekin and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales, and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 2,520 kilometres, about 650 being in South Australia and about 1,870 kilometres from South Australia to the source. The Darling from its junction with the Murray to its junction with the Culgoa is 1,390 kilometres. The Upper Darling (1,140 kilometres) incorporates the Barwon which commences at the junction of the Culgoa to its junction with the Weir River and the Macintyre River from its junction with the Weir to its source near Maybole. The rivers of the north-west coast of Australia (Western Australia) e.g. the Murchison, Gascoyne, Ashburton, Fortescue, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

The 'lakes' of Australia may be divided into three classes; true permanent lakes; lakes which being very shallow, become mere morasses in dry seasons or even dry up, and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening into a lake-like expanse. The second class, which are a characteristic of the interior lowlands are of considerable extent. The largest are Lake Eyre 9,500 square kilometres, Lake Torrens 5,900 square kilometres and Lake Gairdner 4,300 square kilometres.

For further information on the landforms and the geographical features of Australia earlier issues of the Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

Area, coastline, tropical and temperate zones, and standard times. The areas of the States and Territories and the length of the coastline were determined in 1973, by the Division of National Mapping, Department of National Resources, by manually digitising these features from the 1:250,000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60,000 points were digitised at an approximate spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

The approximate high water mark coastline was digitised and included all bays, ports and estuaries which are open to the sea. In these cases, the shoreline was assumed to be where the seaward boundary of the title of ownership would be. In mangroves, the shoreline was assumed to be on the landward side. Rivers were considered in a similar manner but the decisions were rather more subjective, the line being across the river where it appeared to take its true form.

AREA, COASTLINE, TROPICAL AND TEMPERATE ZONES, AND STANDARD TIMES: AUSTRALIA

NOTE. *See* paragraphs above for methods of estimating area and coastline.

	Estimated area			*Percentage of total area in*		*Standard times*	
State or Territory	*Total*	*Percentage of total area*	*Length of coastline*	*Tropical zone*	*Temperate zone*	*Meridian selected*	*Ahead of G.M.T. (a)*
	km²		km				hours
New South Wales	801,600	10.43	1,900	..	100	150°E	(*b*)10.0
Victoria	227,600	2.96	1,800	..	100	150°E	(*b*)10.0
Queensland	1,727,200	22.48	7,400	54	46	150°E	10.0
South Australia	984,000	12.81	3,700	..	100	142°30'E	(*b*)9.5
Western Australia	2,525,500	32.87	12,500	37	63	120°E	8.0
Tasmania	67,800	0.88	3,200	..	100	150°E	(*b*)10.0
Northern Territory	1,346,200	17.52	6,200	81	19	142°30'E	9.5
Australian Capital Territory	2,400	0.03	35	..	100	150°E	(*b*)10.0
Australia	**7,682,300**	**100.00**	**36,735**	**39**	**61**	..	..

(*a*) Greenwich Mean Time. (*b*) Because of 'daylight saving' an hour should be added from late October to early March.

Climate of Australia

General

The climate of Australia is predominantly continental but the insular nature of the land mass is significant in producing some modification of the continental pattern.

The island continent of Australia is relatively dry with 50 per cent of the area having a median rainfall of less than 300 millimetres per year and 80 per cent less than 600 millimetres. Extreme minimum temperatures are not as low as those recorded in other continents because of the absence of extensive mountain masses and because of the expanse of ocean to the south. However, extreme maxima are comparatively high, reaching 50°C over the inland, mainly due to the great east-west extent of the continent in the vicinity of the Tropic of Capricorn.

Climatic discomfort, particularly heat discomfort, is significant over most of Australia. During summer, prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical discomfort. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe for relatively short periods.

Climatic controls

The generally low relief of Australia causes little obstruction to the atmospheric systems which control the climate. A notable exception is the eastern uplands which modify the atmospheric flow.

In the winter half of the year (May–October) anticyclones, or high pressure systems, pass from west to east across the continent and often remain almost stationary over the interior for several days. These anticyclones may extend to 4,000 kilometres along their west-east axes. Northern Australia is then influenced by mild, dry south-east trade winds, and southern Australia experiences cool, moist westerly winds. The westerlies and the frontal systems associated with extensive depressions travelling over the Southern Ocean have a controlling influence on the climate of southern Australia during the winter season, causing rainy periods. Cold outbreaks, particularly in south-east Australia, occur when cold air of Southern Ocean origin is directed northwards by intense depressions having diameters up to 2,000 kilometres. Cold fronts associated with the southern depressions, or with secondary depressions over the Tasman Sea, may produce large day-to-day changes in temperature in southern areas, particularly in south-east coastal regions.

In the summer half of the year (November–April) the anticyclones travel from west to east on a more southerly track across the southern fringes of Australia directing easterly winds generally over the continent. Fine, warmer weather predominates in southern Australia with the passage of each anticyclone. Heat waves occur when there is an interruption to the eastward progression of the anticyclone (blocking) and winds back northerly and later north-westerly. Northern Australia comes under the influence of summer disturbances associated with the southward intrusion of warm moist monsoonal air from north of the inter-tropical covergence zone resulting in a hot rainy season.

Tropical cyclones develop over the seas to the north-west and the north-east of Australia in summer between November and April. Their frequency of occurrence and the tracks they follow vary greatly from season to season. On the average, about three cyclones per season directly affect the Queensland coast, and about three affect the north and north-west coasts. Tropical cyclones approaching the coast usually produce very heavy rain in coastal areas. Some cyclones move inland, losing intensity but still producing widespread heavy rainfall. Individual cyclonic systems may control the weather over northern Australia for periods extending to three weeks.

Rainfall

Annual. The annual 10, 50 and 90 percentile* rainfall maps are shown on Plates 3–5 respectively. The area of lowest rainfall is east of Lake Eyre in South Australia, where the median (50 percentile) rainfall is only about 100 millimetres. Mulka has a median annual rainfall of 81 millimetres (57 years of record to 1980 inclusive). Another very low rainfall area is in Western Australia in the Giles-Warburton Range region, which has a median annual rainfall of about 150 millimetres. A vast region extending from the west coast near Shark Bay across the interior of Western Australia and South Australia to south-west Queensland and north-west New South Wales has a median annual rainfall of less than 200 millimetres. This region is not normally exposed to moist air masses for extended periods and rainfall is irregular, averaging only one or two days per month. However, in favourable synoptic situations, which occur infrequently over extensive parts of the region, up to 400 millimetres of rain may fall within a few days and result in widespread flooding.

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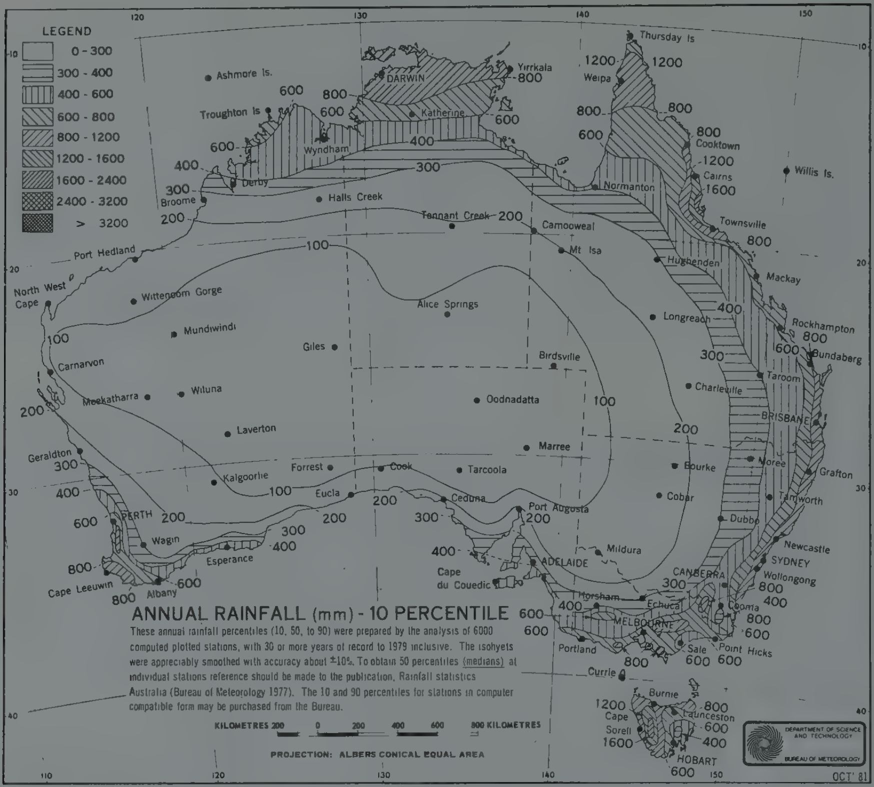
* The amounts that are not exceeded by 10, 50 and 90 per cent of all recordings are the 10, 50 and 90 percentiles or the first, fifth and ninth deciles respectively. The 50 percentile is usually called the median.


LEGEND
0 - 300
300 - 400
400 - 600
600 - 800
800 - 1200
1200 - 1600
1600 - 2400
2400 - 3200
> 3200
Ashmore Is.
Troughton Is
Wyndham
Derby
Broome
Halls Creek
DARWIN
Katherine
Yirrkala
Thursday Is
Weipa
Cooktown
Cairns
Willis Is.
Normanton
Townsville
Tennant Creek
Camooweal
Mt Isa
Hughenden
Mackay
Port Hedland
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Bundaberg
Mundiwindi
Giles
Birdsville
Taroom
Carnarvon
Meekatharra
Wiluna
Oodnadatta
Charleville
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Port Augusta
Cobar
Tamworth
PERTH
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
ADELAIDE
CANBERRA
Wollongong
Cape Leeuwin
Albany
Cape du Couedic
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
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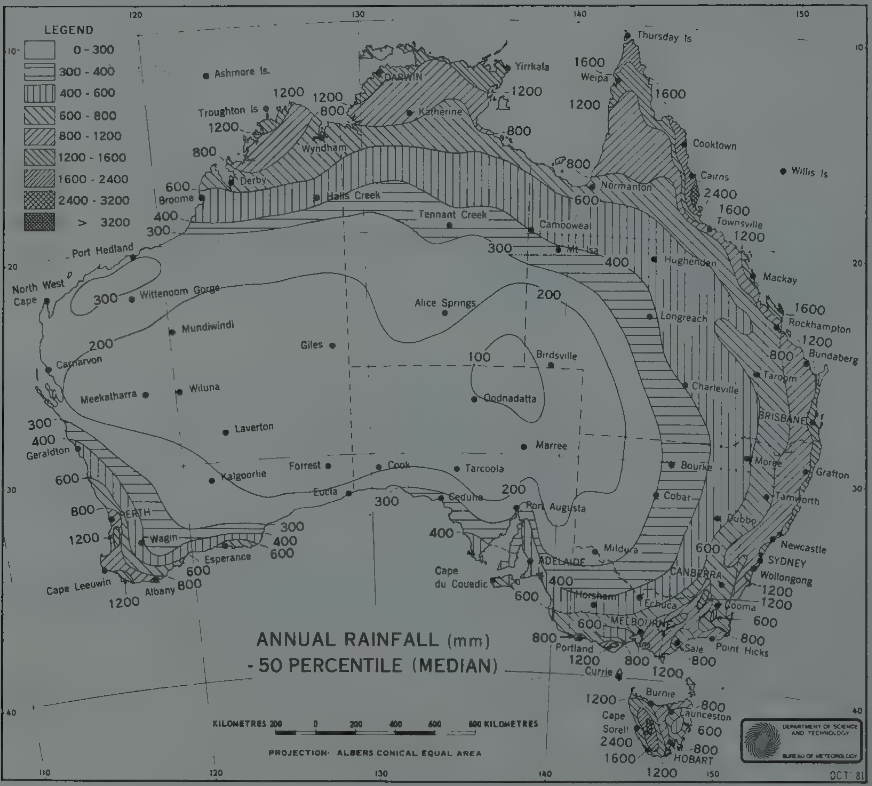
ANNUAL RAINFALL (mm) - 10 PERCENTILE

These annual rainfall percentiles (10, 50, to 90) were prepared by the analysis of 6000 computed plotted stations, with 30 or more years of record to 1979 inclusive. The isohyets were appreciably smoothed with accuracy about ±10%. To obtain 50 percentiles (medians) at individual stations reference should be made to the publication, Rainfall statistics Australia (Bureau of Meteorology 1977). The 10 and 90 percentiles for stations in computer compatible form may be purchased from the Bureau.


LEGEND
0 - 300
300 - 400
400 - 600
600 - 800
800 - 1200
1200 - 1600
1600 - 2400
2400 - 3200
> 3200
Ashmore Is.
Troughton Is
Wyndham
Derby
Broome
Halls Creek
DARWIN
Katherine
Yirrkala
Thursday Is
Weipa
Cooktown
Cairns
Willis Is
Normanton
Townsville
Tennant Creek
Camooweal
Mt Isa
Hughenden
Mackay
Port Hedland
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Bundaberg
Mundiwindi
Giles
Birdsville
Taroom
Carnarvon
Meekatharra
Wiluna
Oodnadatta
Charleville
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Port Augusta
Cobar
Tamworth
PERTH
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
ADELAIDE
CANBERRA
Wollongong
Cape Leeuwin
Albany
Cape du Couedic
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
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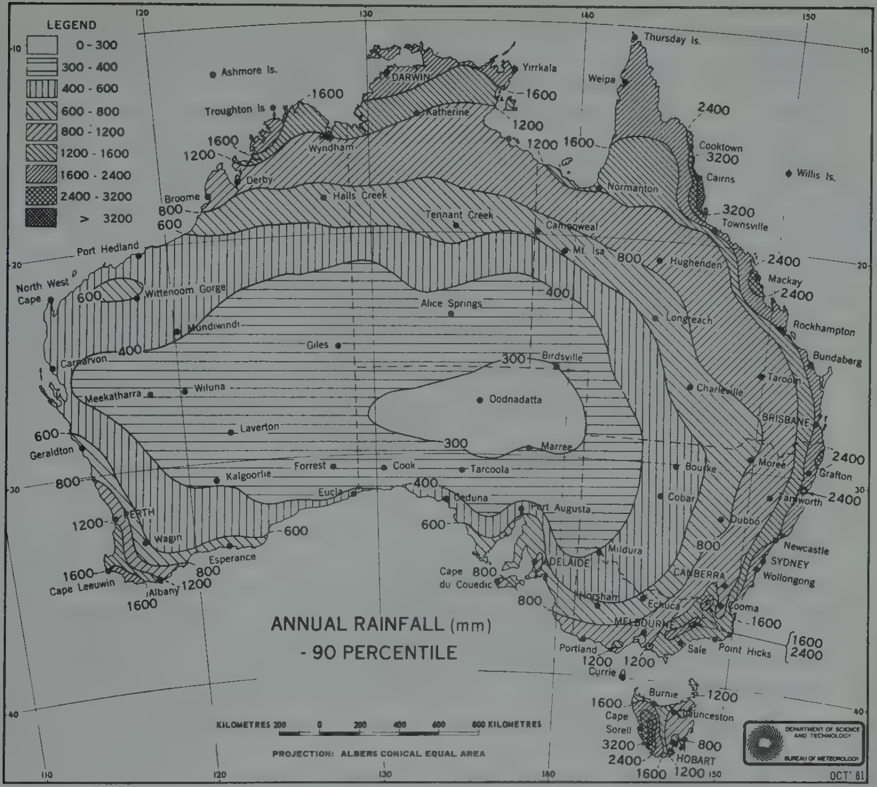
ANNUAL RAINFALL (mm)
- 50 PERCENTILE (MEDIAN)

PLATES 2 and 3


LEGEND
0 - 300
300 - 400
400 - 600
600 - 800
800 - 1200
1200 - 1600
1600 - 2400
2400 - 3200
> 3200
ANNUAL RAINFALL (mm)
- 90 PERCENTILE
Ashmore Is.
Troughton Is
DARWIN
Yirrkala
Katherine
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Thursday Is.
Weipa
Cooktown
Cairns
Willis Is.
Normanton
Townsville
Mt. Isa
Hughenden
Mackay
Rockhampton
Bundaberg
Longreach
Port Hedland
North West Cape
Wittenoom Gorge
Mundiwindi
Alice Springs
Giles
Birdsville
Carnarvon
Meekatharra
Wiluna
Oodnadatta
Charleville
Taroom
BRISBANE
Laverton
Geraldton
Marree
Bourke
Moree
Grafton
Forrest
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Tarcoola
Kalgoorlie
Eucla
Ceduna
Port Augusta
Cobar
Tamworth
PERTH
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
Wollongong
Cape Leeuwin
Albany
Cape du Couedic
ADELAIDE
CANBERRA
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
DEPARTMENT OF SCIENCE AND TECHNOLOGY
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PLATE 4

The region with the highest median annual rainfall is the east coast of Queensland between Cairns and Cardwell, where Tully has a median of 4,203 millimetres (56 years to 1980 inclusive). The mountainous region of western Tasmania also has a high annual rainfall, with Lake Margaret having a median of 3,575 millimetres (68 years to 1980 inclusive). In the mountainous areas of north-east Victoria and some parts of the east coastal slopes there are small pockets with median annual rainfall greater than 2,500 millimetres, but the map scale is too small for these to be shown.

The Snowy Mountains area in New South Wales also has a particularly high rainfall. The highest median annual rainfall isohyet drawn for this region is 3,200 millimetres, and it is likely that small areas have a median annual rainfall approaching 4,000 millimetres on the western slopes above 2,000 metres elevation.

The following table shows the area distribution of the median annual rainfall.

AREA DISTRIBUTION OF MEDIAN ANNUAL RAINFALL: AUSTRALIA

(Per cent)

Median annual rainfall	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
Under 200 mm . . .	8.0	. .	10.2	74.2	43.5	. .	15.5	29.6
200 to 300 „ . . .	20.3	6.3	13.0	13.5	29.6	. .	35.6	22.9
300 „ 400 „ . . .	19.0	19.2	12.3	6.8	10.5	. .	9.0	11.2
400 „ 500 „ . . .	12.4	11.8	13.5	3.2	4.3	. .	6.6	7.6
500 „ 600 „ . . .	11.3	14.1	11.6	1.8	3.1	12.2	5.8	6.6
600 „ 800 „ . . .	15.1	24.5	20.5	0.5	4.6	18.2	11.6	10.7
800 „ 1,200 „ . .	11.3	17.7	12.6	. .	3.7	25.0	9.6	7.7
Above 1,200 „ . .	2.6	6.4	6.3	. .	0.7	44.6	6.3	3.7
Total . . .	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(*a*) Includes Australian Capital Territory.

Seasonal. As outlined under the heading of Climatic controls, the rainfall pattern is strongly seasonal in character with a winter rainfall regime in the south and a summer regime in the north.

The dominance of rainfall over other climatic elements in determining the growth of specific plants in Australia has led to the development of a climatic classification based on two main parameters. These parameters are median annual rainfall and seasonal rainfall incidence. Plate 5, page 15, is a reduced version of the seasonal rainfall zones arising from this classification (*see* Bureau of Meteorology publication *Climatic Atlas of Australia, Map Set 5, Rainfall*, 1977).

Evaporation and the concept of rainfall effectiveness are taken into account to some extent in this classification by assigning higher median annual rainfall limits to the summer zones than the corresponding uniform and winter zones. The main features of the seasonal rainfall are:

(a) marked wet summer and dry winter of northern Australia;
(b) wet summer and relatively dry winter of south-eastern Queensland and north-eastern New South Wales;
(c) uniform rainfall in south-eastern Australia—much of New South Wales, parts of eastern Victoria and in southern Tasmania;
(d) marked wet winter and dry summer of south-west Western Australia and (to a lesser extent) of much of the remainder of southern Australia directly influenced by westerly circulation;
(e) arid area comprising about half of the continent extending from the north-west coast of Western Australia across the interior and reaching the south coast at the head of the Great Australian Bight.

The seasonal rainfall classification (*Climatic Atlas, Map Set 5*) can be further reduced to provide a simplified distribution of seven climatic zones shown in Plate 7.

Variability. The adequate presentation of rainfall variability over an extensive geographical area is difficult. Probably the best measures are found in tables compiled for a number of individual stations in some of the Climatic Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly, seasonal or annual time spans. Statistical indexes of rainfall variation based on several techniques have been used to compile maps showing main features of the variability of annual rainfall over Australia.

One index for assessing the variability of annual rainfall is given by the ratio of the 90–10 percentile range to the 50 percentile (median value) i.e. Variability Index = $\frac{90 - 10}{50}$ percentiles.

Variability based on this relationship (Gaffney 1975) is shown in Plate 7, page 17. The region of high to extreme variability shown in Plate 7, lies mostly in the arid zone with summer rainfall incidence, AZ(S), defined on Plate 5, page 15. In the winter rainfall zones the variability is generally low to moderate as exemplified by the south-west of Western Australia. In the tropics, random cyclone visitations cause extremely great variations in rainfall from year to year: at Onslow (Western Australia), annual totals varied from 15 millimetres in 1912 to 1,085 millimetres in 1961 and, in the four consecutive years 1921 to 1924, the annual totals were 566, 69, 682 and 55 millimetres respectively. At Whim Creek (Western Australia), where 747 millimetres have been recorded in a single day, only 4 millimetres were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas: at Tully (Queensland), the annual rainfalls have varied from 7,898 millimetres in 1950 to 2,486 millimetres in 1961.

Rainday frequency. The average number of days per year with rainfall of 0.2 millimetres or more is shown in Plate 8, page 17.

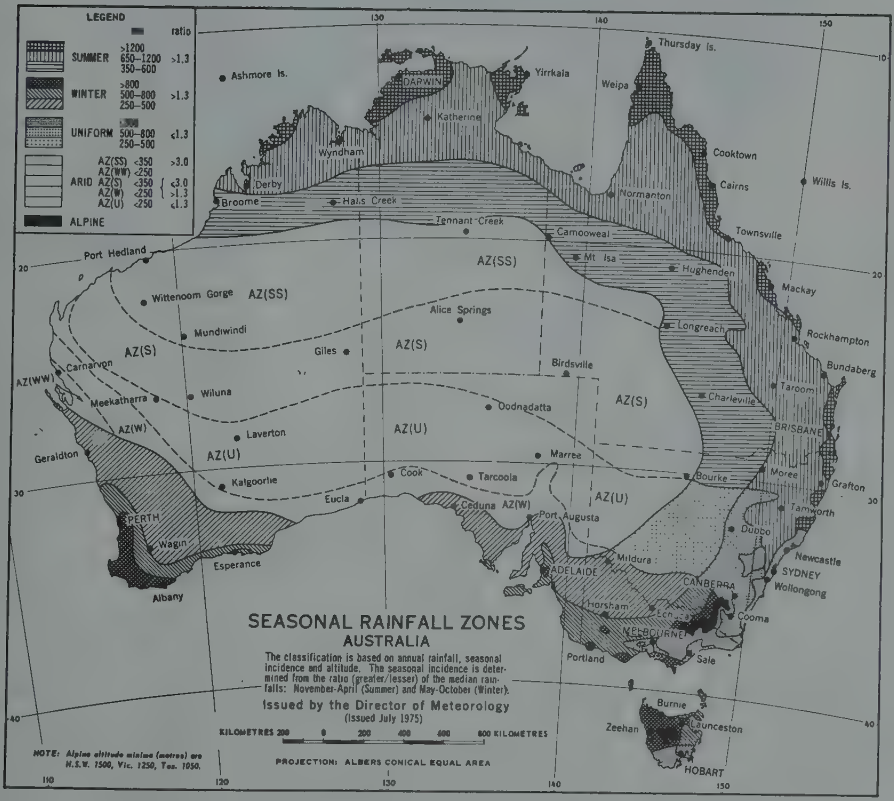
The frequency of rain-days exceed 150 per year in Tasmania (with a maximum of over 200 in western Tasmania), southern Victoria, parts of the north Queensland coast and in the extreme south-west of Western Australia. Over most of the continent the frequency is less than 50 rain-days per year. The area of low rainfall with high variability, extending from the north-west coast of Western Australia through the interior of the continent, has less than 25 rain-days per year. In the high rainfall areas of northern Australia the number of rain-days is about 80 per year, but heavier falls occur in this region than in southern regions.

Intensity. The highest rainfall intensities for some localities are shown in the first table on page 18. These figures represent intensities over only small areas around the recording points because turbulence and exposure characteristics of the measuring gauge may vary over a distance of a few metres. The highest rainfall measured for one hour is 330 millimetres at Deeral, Queensland, 13 March 1936. The highest 24-hour (9 a.m. to 9 a.m.) falls are listed by States in the second table on page 18. Most of the very high 24-hour falls (above 700 millimetres) have occurred in the coastal strip of Queensland, where a tropical cyclone moving close to mountainous terrain provides ideal conditions for spectacular falls. The highest 24-hour fall (1,140 millimetres) occurred at Bellenden Ker (Top Station) on 4 January 1979. Bellenden Ker (Top Station) has also recorded the highest monthly rainfall in Australia (5,387 millimetres in January 1979).

The highest annual rainfalls are listed by States in the following table.

HIGHEST ANNUAL RAINFALLS
(All years to 1980 inclusive)

State	*Station*	*Year*	*Amount*
			mm
New South Wales	Tallowwood Point	1950	4,540
Victoria	Mt Buffalo Chalet	1917	3,342
Queensland	Bellenden Ker (Top Station)	1979	11,251
South Australia	Aldgate State School	1917	1,851
Western Australia	Karnet	1964	2,601
Tasmania	Lake Margaret	1948	4,504
Northern Territory	Elizabeth Downs	1973	2,966


LEGEND
ratio
SUMMER >1200 650–1200 350–600 >1.3
WINTER >800 500–800 250–500 >1.3
UNIFORM 500–800 250–500 <1.3
ARID
AZ(SS) <350 >3.0
AZ(WW) <250
AZ(S) <350 <3.0
AZ(W) <250 >1.3
AZ(U) <250 <1.3
ALPINE
Ashmore Is.
DARWIN
Yirrkala
Katherine
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Thursday Is.
Weipa
Cooktown
Cairns
Willis Is.
Normanton
Townsville
Camooweal
Mt Isa
Hughenden
Mackay
Port Hedland
Wittenoom Gorge
AZ(SS)
Mundiwindi
Alice Springs
Longreach
Rockhampton
AZ(S)
Carnarvon
Giles
Birdsville
Bundaberg
AZ(WW)
Meekatharra
Wiluna
Oodnadatta
Taroom
Charleville
BRISBANE
AZ(W)
Laverton
AZ(U)
Marree
Geraldton
Kalgoorlie
Cook
Tarcoola
Bourke
Moree
Grafton
Eucla
Ceduna
AZ(W)
Port Augusta
Tamworth
PERTH
Wagin
Esperance
Albany
Dubbo
Mildura
ADELAIDE
Newcastle
SYDNEY
Wollongong
CANBERRA
Horsham
Echuca
MELBOURNE
Cooma
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
110
120
130
140
150
10
20
30
40

SEASONAL RAINFALL ZONES
AUSTRALIA

The classification is based on annual rainfall, seasonal incidence and altitude. The seasonal incidence is determined from the ratio (greater/lesser) of the median rainfalls: November-April (Summer) and May-October (Winter).

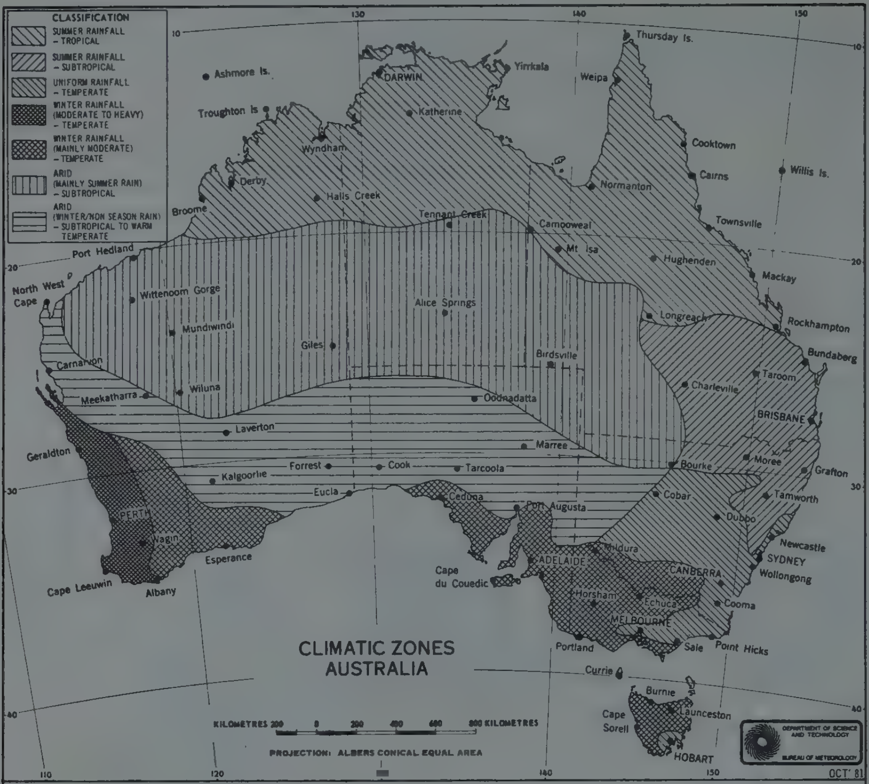
Issued by the Director of Meteorology
(Issued July 1975)

KILOMETRES 200 0 200 400 600 800 KILOMETRES

PROJECTION: ALBERS CONICAL EQUAL AREA

NOTE: Alpine altitude minima (metres) are N.S.W. 1500, Vic. 1250, Tas. 1050.

PLATE 5


CLASSIFICATION
SUMMER RAINFALL – TROPICAL
SUMMER RAINFALL – SUBTROPICAL
UNIFORM RAINFALL – TEMPERATE
WINTER RAINFALL (MODERATE TO HEAVY) – TEMPERATE
WINTER RAINFALL (MAINLY MODERATE) – TEMPERATE
ARID (MAINLY SUMMER RAIN) – SUBTROPICAL
ARID (WINTER/NON SEASON RAIN) – SUBTROPICAL TO WARM TEMPERATE
CLIMATIC ZONES AUSTRALIA
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
DEPARTMENT OF SCIENCE AND TECHNOLOGY
BUREAU OF METEOROLOGY
OCT' 81
110
120
130
140
150
10
20
30
40
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is.
Derby
Halls Creek
Normanton
Broome
Tennant Creek
Camooweal
Townsville
Port Hedland
Mt Isa
Hughenden
Mackay
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
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SYDNEY
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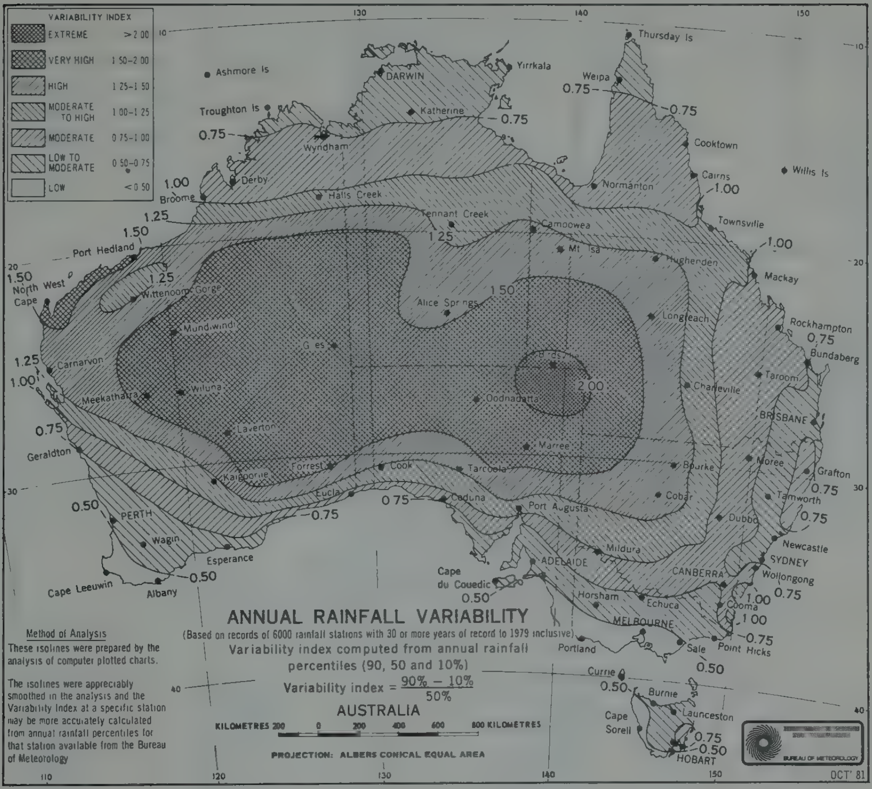
Cape du Couedic
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART

CLASSIFICATION	SEASONAL CHARACTERISTICS SUMMER	WINTER
Summer Rainfall – Tropical	Heavy periodic rains (heavier in coastal & highland areas) Hot generally Humid in coastal areas	Generally rainless Mild to warm Dry
Summer Rainfall – Subtropical	Heavy periodic rains (heavier in coastal & highland areas) Mainly hot Humid in highlands & coastal areas	Some significant rain Mild
Uniform Rainfall – Temperate	Mainly reliable rain Warm to hot	Mainly reliable rain Cool to cold
Winter Rainfall (moderate to heavy) – Temperate	Irregular rain, mostly light Warm to hot	Reliable rain (moderate to heavy) Cool to mild
Winter Rainfall (mainly moderate) – Temperate	Mostly light irregular rain Warm to hot	Reliable rain (mainly moderate) Cool to cold
Arid (mainly summer rain) – Subtropical	Variably rain Hot to extreme Very dry	Mainly irregular light rain Mild to warm Dry
Arid (winter or non–seasonal rain) – Warm Temperate to Subtropical	Very irregular rain Hot to extreme Very dry	Variable rain, mainly light Cool to mild Dry

[Reference:- Climatic Atlas of Australia, Map set 5, Bureau of Meteorology 1975]

PLATE 6


VARIABILITY INDEX
EXTREME >2 00
VERY HIGH 1 50–2 00
HIGH 1 25–1 50
MODERATE TO HIGH 1 00–1 25
MODERATE 0 75–1 00
LOW TO MODERATE 0 50–0 75
LOW <0 50
Ashmore Is
DARWIN
Yirrkala
Thursday Is
Weipa
Troughton Is
Katherine
Wyndham
Derby
Broome
Halls Creek
Cooktown
Cairns
Willis Is
Normanton
Tennant Creek
Camooweal
Townsville
Mt Isa
Hughenden
Mackay
Port Hedland
North West Cape
Wittenoom Gorge
Mundiwindi
Alice Springs
Longreach
Rockhampton
Bundaberg
Giles
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Kalgoorlie
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Tamworth
Eucla
Ceduna
Port Augusta
Cobar
Dubbo
PERTH
Wagin
Esperance
Mildura
Newcastle
SYDNEY
ADELAIDE
CANBERRA
Wollongong
Cape Leeuwin
Albany
Cape du Couedic
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART
0.50
0.75
1.00
1.25
1.50
2.00
110
120
130
140
150
10
20
30
40
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ANNUAL RAINFALL VARIABILITY

(Based on records of 6000 rainfall stations with 30 or more years of record to 1979 inclusive)

Variability index computed from annual rainfall percentiles (90, 50 and 10%)

$$\text{Variability index} = \frac{90\% - 10\%}{50\%}$$

AUSTRALIA

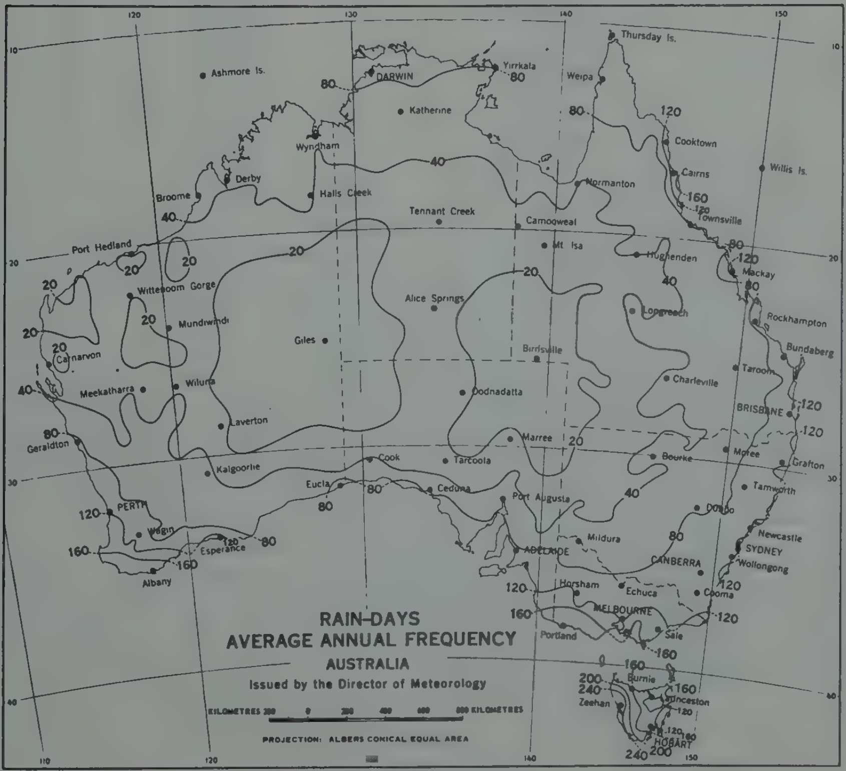
KILOMETRES 200 0 200 400 600 800 KILOMETRES

PROJECTION: ALBERS CONICAL EQUAL AREA

Method of Analysis

These isolines were prepared by the analysis of computer plotted charts.

The isolines were appreciably smoothed in the analysis and the Variability Index at a specific station may be more accurately calculated from annual rainfall percentiles for that station available from the Bureau of Meteorology


Ashmore Is.
DARWIN
Yirrkala
Thursday Is.
Weipa
Katherine
Cooktown
Wyndham
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Willis Is.
Derby
Broome
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Grafton
Eucla
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Tamworth
PERTH
Port Augusta
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Mildura
Newcastle
Esperance
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CANBERRA
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
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80
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160
200
240
110
120
130
140
150
10
20
30
40

RAIN–DAYS
AVERAGE ANNUAL FREQUENCY
AUSTRALIA
Issued by the Director of Meteorology

KILOMETRES 200 0 200 400 600 800 KILOMETRES

PROJECTION: ALBERS CONICAL EQUAL AREA

PLATES 7 and 8

HIGHEST RAINFALL INTENSITIES IN SPECIFIED PERIODS
(millimetres)

(*Source:* Pluviograph records in Bureau of Meteorology archives.)

Station	*Period of record*	*Years of complete records*	*Period in hours*				
			1	*3*	*6*	*12*	*24*
			mm	mm	mm	mm	mm
Adelaide	1897–1980	80	69	133	141	141	141
Alice Springs	1951–1980	28	75	77	87	108	150
Brisbane	1911–1980	67	88	144	182	265	327
Broome	1948–1979	32	112	157	185	313	351
Canberra	1932–1979	44	51	68	71	89	139
Carnarvon	1956–1979	24	32	63	83	95	108
Charleville	1953–1980	28	42	66	75	111	142
Cloncurry	1953–1975	20	59	118	164	173	204
Darwin (Airport)	1953–1980	25	88	138	214	260	277
Esperance	1963–1979	15	23	45	62	68	79
Hobart	1911–1980	67	28	56	87	117	168
Meekatharra	1953–1979	25	33	67	81	99	112
Melbourne	1878–1980	90	79	83	86	97	130
Mildura	1953–1977	23	49	60	65	65	91
Perth	1946–1980	33	32	38	47	64	93
Sydney	1913–1979	63	97	135	166	190	282
Townsville	1953–1980	26	88	158	235	296	319

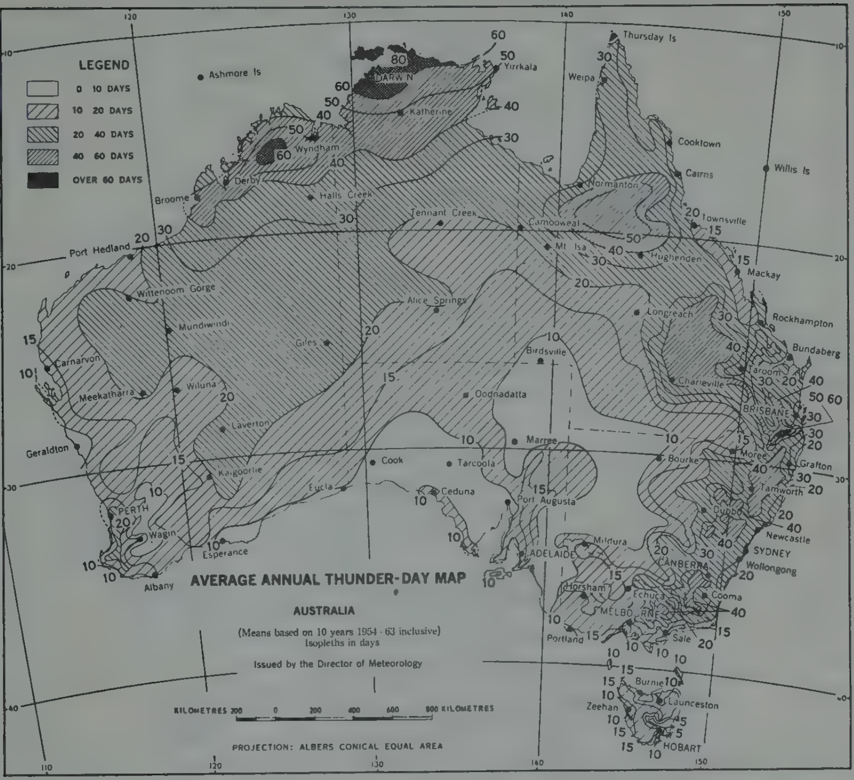
HIGHEST DAILY RAINFALLS
(All years to July 1981)

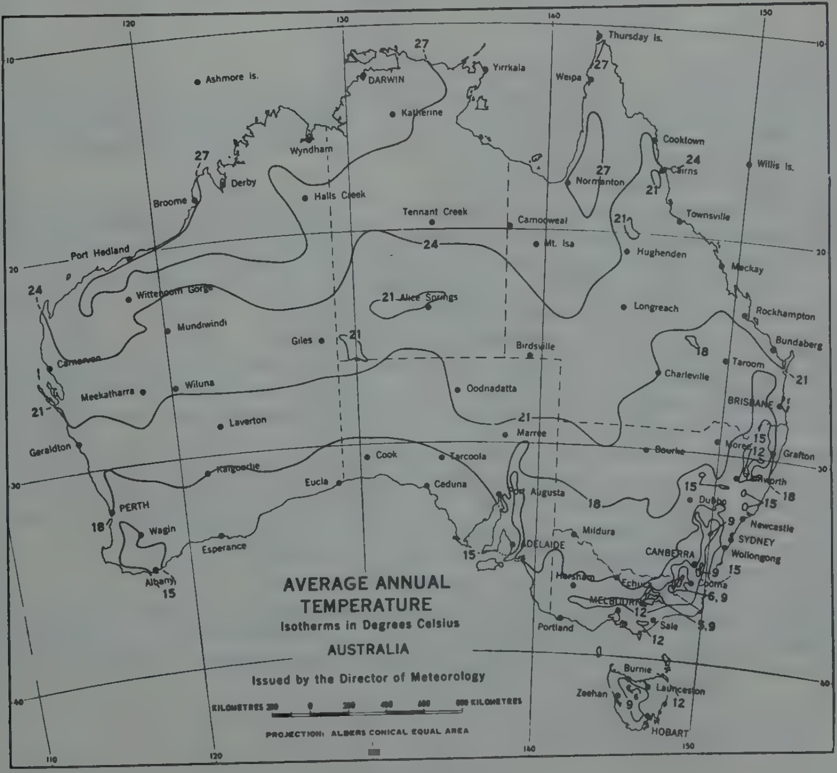
State	*Station*	*Date*	*Amount*
			mm
New South Wales	Dorrigo	21.2.1954	809
	Cordeaux River	14.2.1898	574
Victoria	Balook	18.2.1951	275
	Hazel Park	1.12.1934	267
Queensland	Bellenden Ker (Top Station)	4.1.1979	1,140
	Crohamhurst	3.2.1893	907
	Finch Hatton	18.2.1958	878
	Mount Dangar	20.1.1970	869
South Australia	Stansbury	18.2.1946	222
	Stirling	17.4.1889	208
Western Australia	Whim Creek	3.4.1898	747
	Kilto	4.12.1970	635
	Fortescue	3.5.1890	593
Tasmania	Cullenswood	22.3.1974	352
	Mathinna	5.4.1929	337
Northern Territory	Roper Valley	15.4.1963	545
	Groote Eylandt	28.3.1953	513

Thunderstorms and hail. A thunder-day at a given location is a calendar day on which thunder is heard at least once. Plate 9, page 19 shows isopleths (isobronts) of the average annual number of thunder-days which varies from 80 per year near Darwin to less than 10 per year over parts of the southern regions. Convectional processes during the summer wet season cause high thunderstorm incidence in northern Australia. The generally high incidence (40–60 annually) over the eastern upland areas is produced mainly by orographic uplift of moist air streams.

Hail, mostly of small size (less than 10 millimetres diameter), occurs with winter/spring cold frontal activity in southern Australia. Summer thunderstorms, particularly over the uplands of eastern Australia, sometimes produce large hail (greater than 10 millimetres diameter). Hail capable of piercing light gauge galvanised iron occurs at irregular intervals and sometimes causes widespread damage.

Snow. Generally, snow covers much of the Australian Alps above 1,500 metres for varying periods from late autumn to early spring. Similarly, in Tasmania the mountains are covered fairly frequently above 1,000 metres in these seasons. The area, depth and duration are highly variable and in the altitude range 500–1,000 metres no snow falls in some years. Snowfalls at levels below 500 metres are occasionally experienced in southern Australia, particularly in the foothill areas of Tasmania and Victoria, but falls are usually light and short-lived. In some seasons parts of the eastern uplands above 1,000 metres from Victoria to south-eastern Queensland have been covered with snow for several weeks. In ravines around Mt Kosciusko (2,228 metres) small areas of snow may persist through summer but there are no permanent snowfields.


AVERAGE ANNUAL THUNDER-DAY MAP
AUSTRALIA
(Means based on 10 years 1954 - 63 inclusive)
Isopleths in days
Issued by the Director of Meteorology
LEGEND
0 10 DAYS
10 20 DAYS
20 40 DAYS
40 60 DAYS
OVER 60 DAYS
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Ashmore Is
DARWIN
Katherine
Yirrkala
Thursday Is
Weipa
Cooktown
Cairns
Willis Is
Normanton
Townsville
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Mt. Isa
Hughenden
Mackay
Port Hedland
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Moree
Bourke
Grafton
Cook
Tarcoola
Kalgoorlie
Eucla
Ceduna
Tamworth
Port Augusta
Dubbo
PERTH
Wagin
Mildura
Newcastle
Esperance
ADELAIDE
SYDNEY
CANBERRA
Wollongong
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
110
120
130
140
150
10
20
30
40


AVERAGE ANNUAL TEMPERATURE
Isotherms in Degrees Celsius
AUSTRALIA
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
27
24
21
18
15
12
9
6, 9
Ashmore Is.
DARWIN
Katherine
Yirrkala
Thursday Is.
Weipa
Cooktown
Cairns
Willis Is.
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Normanton
Townsville
Mt. Isa
Hughenden
Mackay
Port Hedland
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Bourke
Moree
Grafton
Kalgoorlie
Cook
Tarcoola
Eucla
Ceduna
Tamworth
Augusta
Dubbo
PERTH
Wagin
Esperance
Mildura
Newcastle
SYDNEY
ADELAIDE
CANBERRA
Wollongong
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
110
120
130
140
150
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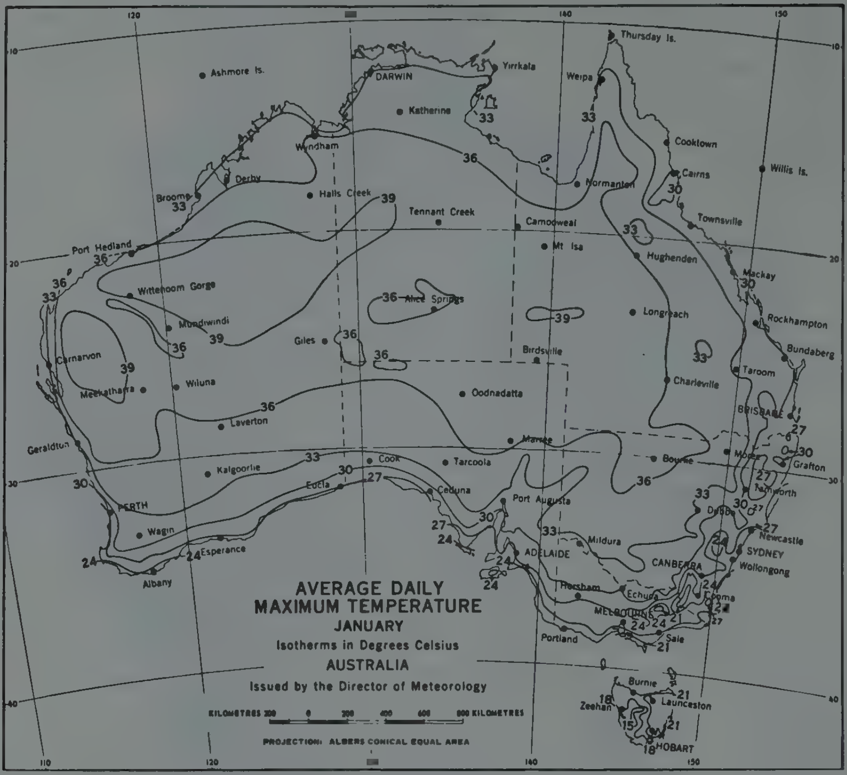
40

PLATES 9 and 10



AVERAGE DAILY
MAXIMUM TEMPERATURE
JANUARY
Isotherms in Degrees Celsius
AUSTRALIA
Issued by the Director of Meteorology

KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Katherine
Wyndham
Cooktown
Derby
Cairns
Willis Is.
Normanton
Broome
Halls Creek
Tennant Creek
Camooweal
Townsville
Port Hedland
Mt Isa
Hughenden
Mackay
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Moree
Grafton
Geraldton
Kalgoorlie
Cook
Tarcoola
Bourke
Tamworth
Eucla
Ceduna
Port Augusta
Dubbo
PERTH
Newcastle
Wagin
Mildura
SYDNEY
ADELAIDE
Wollongong
Esperance
CANBERRA
Albany
Horsham
Echuca
Cooma
MELBOURNE
Sale
Portland
Burnie
Launceston
Zeehan
HOBART
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110
120
140
150
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36
39

PLATE 11

Temperature

Average temperatures. Average annual air temperatures as shown in Plate 10, page 19 range from 28° C along the Kimberley coast in the extreme north of Western Australia to 4° C in the alpine areas of south-eastern Australia. Although annual temperature may be used for broad comparisons, monthly temperatures are required for detailed analyses.

July is the month with the lowest average temperature in all parts of the continent. The months with the highest average temperature are January or February in the south and December in the north (except in the extreme north and north-west where it is November). The slightly lower temperatures of mid-summer in the north are due to the increase in cloud during the wet season.

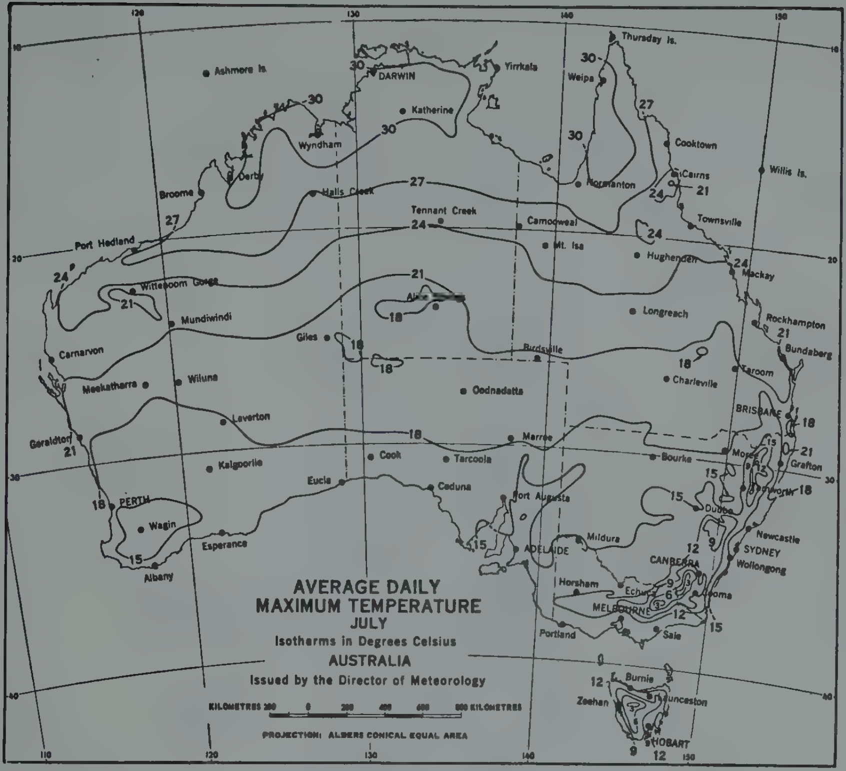
Average monthly maxima. Maps of average maximum and minimum temperatures for the months of January and July are shown in Plates 11–14 inclusive, pages 20–22.

In January, average maximum temperatures exceed 35° C over a vast area of the interior and exceed 40° C over appreciable areas of the north-west. The consistently hottest part of Australia in terms of summer maxima is around Marble Bar, Western Australia (150 kilometres south-east of Port Hedland) where the average is 41° C and daily maxima during summer may exceed 40°C consecutively for several weeks at a time.

The marked gradients of isotherms of maximum temperature in summer in coastal areas, particularly along the south and west coasts, are due to the penetration inland of fresh sea breezes initiated by the sharp temperature discontinuities between the land and sea surfaces. There are also gradients of a complex nature in south-east coastal areas caused primarily by the uplands.

In July a more regular latitudinal distribution of average maxima is evident. Maxima range from 30°C near the north coast to 5° C in the alpine areas of the south-east.

Average monthly minima. In January average minima range from 27° C on the north-west coast to 5° C in the alpine areas of the south-east. In July average minima fall below 5° C in areas south of the tropics (away from the coasts). Alpine areas record the lowest temperatures; the July average is as low as –5° C.


AVERAGE DAILY
MAXIMUM TEMPERATURE
JULY
Isotherms in Degrees Celsius
AUSTRALIA
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Katherine
Wyndham
Derby
Cooktown
Willis Is.
Cairns
Normanton
Broome
Halls Creek
Tennant Creek
Camooweal
Townsville
Port Hedland
Mt. Isa
Hughenden
Mackay
Wittenoom Gorge
Alice Springs
Mundiwindi
Longreach
Rockhampton
Bundaberg
Giles
Birdsville
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
Laverton
BRISBANE
Geraldton
Marree
Moree
Bourke
Grafton
Kalgoorlie
Cook
Tarcoola
Eucla
Ceduna
Tamworth
Port Augusta
Dubbo
PERTH
Wagin
Mildura
Newcastle
SYDNEY
Esperance
ADELAIDE
Wollongong
Albany
CANBERRA
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
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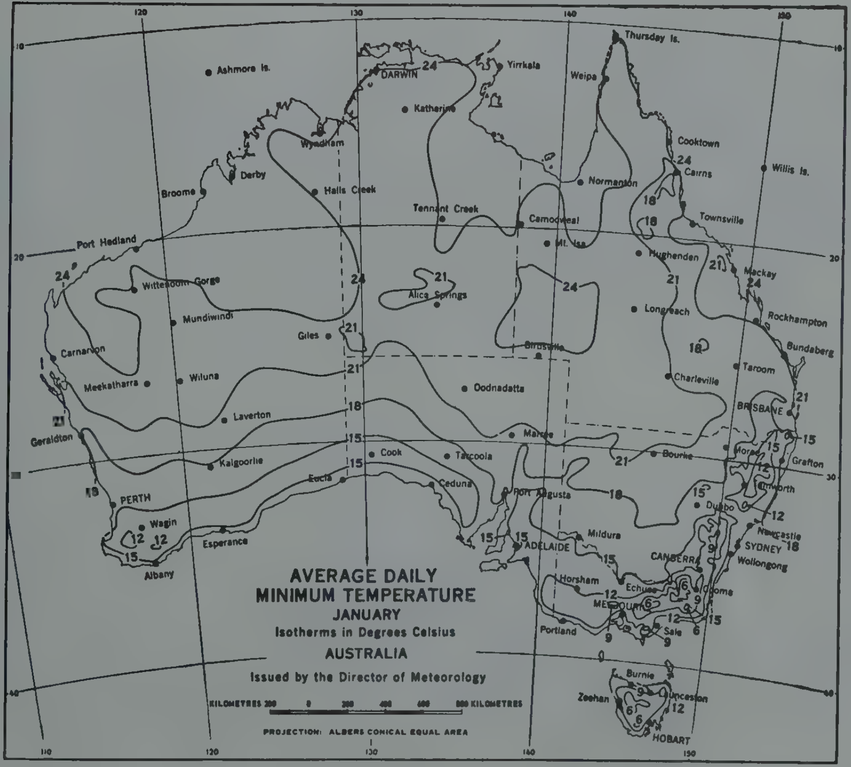
130
140
150
10
20
30
40


AVERAGE DAILY
MINIMUM TEMPERATURE
JANUARY
Isotherms in Degrees Celsius
AUSTRALIA
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Katherine
Wyndham
Derby
Cooktown
Cairns
Willis Is.
Normanton
Broome
Halls Creek
Tennant Creek
Camooweal
Townsville
Port Hedland
Mt. Isa
Hughenden
Mackay
Wittenoom Gorge
Alice Springs
Mundiwindi
Longreach
Rockhampton
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
Laverton
BRISBANE
Geraldton
Marree
Bourke
Moree
Grafton
Kalgoorlie
Cook
Tarcoola
Eucla
Ceduna
Tamworth
Port Augusta
Dubbo
PERTH
Wagin
Mildura
Newcastle
SYDNEY
Esperance
ADELAIDE
Wollongong
Albany
CANBERRA
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Burnie
Zeehan
Launceston
HOBART
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150
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20
30
40

PLATES 12 and 13

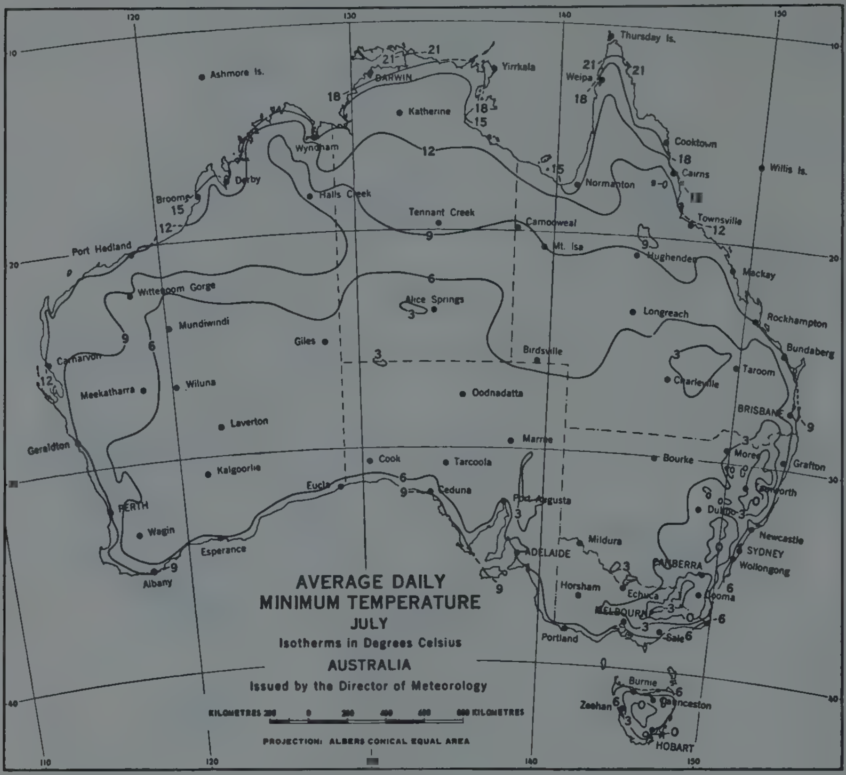

AVERAGE DAILY
MINIMUM TEMPERATURE
JULY
Isotherms in Degrees Celsius
AUSTRALIA
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
130
140
150
10
20
30
40
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Katherine
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Normanton
Cooktown
Cairns
Willis Is.
Townsville
Camooweal
Mt. Isa
Hughenden
Port Hedland
Wittenoom Gorge
Mackay
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Bundaberg
Carnarvon
Birdsville
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Geraldton
Marree
Moree
Bourke
Grafton
Cook
Tarcoola
Kalgoorlie
Eucla
Ceduna
Tamworth
Port Augusta
Dubbo
PERTH
Wagin
Newcastle
SYDNEY
Wollongong
Esperance
Mildura
ADELAIDE
CANBERRA
Albany
Horsham
Echuca
Cooma
MELBOURNE
Sale
Portland
Burnie
Zeehan
Launceston
HOBART
21
18
15
12
9
6
3
0

PLATE 14

Extreme maxima. Temperatures have exceeded 45°C at nearly all inland stations more than 150 kilometres from the coast and at many places on the north-west and south coasts. Temperatures have exceeded 50°C at some inland stations and at a few near the coast. It is noteworthy that Eucla on the south coast has recorded 50.7°C, the highest temperature in Western Australia. This is due to the long trajectory over land of hot north-west winds from the Marble Bar area. Although the highest temperature recorded in Australia was 53.1°C at Cloncurry (Queensland), more stations have exceeded 50°C in western New South Wales than in other areas due to the long land trajectory of hot winds from the north-west interior of the continent.

Extreme maximum temperatures recorded at selected stations, including the highest recorded in each State, are shown in the table below.

EXTREME MAXIMUM TEMPERATURES

(All years to July 1982)

Station	*°C*	*Date*	*Station*	*°C*	*Date*
New South Wales—			Western Australia—		
Bourke	52.8	17.1.1877	Eucla	50.7	22.1.1906
Walgett	50.1	2.1.1903	Mundrabilla	49.8	3.1.1979
Wilcannia	50.0	11.1.1939	Forrest	49.8	13.1.1979
Victoria—			Madura	49.4	7.1.1971
Mildura	50.8	6.1.1906	Tasmania—		
Swan Hill	49.4	18.1.1906	Bushy Park	40.8	26.12.1945
Queensland—			Hobart	40.8	4.1.1976
Cloncurry	53.1	16.1.1889	Northern Territory—		
Winton	50.7	14.12.1888	Finke	48.3	2.1.1960
Birdsville	50.0	24.12.1972	Jervois	47.5	3.1.1978
South Australia—			Australian Capital Territory—		
Oodnadatta	50.7	2.1.1960	Canberra (Acton)	42.8	11.1.1939
Kyancutta	49.3	9.1.1939			

Extreme minima. The lowest temperatures in Australia have been recorded in the Snowy Mountains, where Charlotte Pass (elevation 1,760 metres) has recorded –22.2°C on 14 July 1945 and 22 August 1947. Temperatures have fallen below -5°C at most inland places south of the tropics and at some places within a few kilometres of southern coasts. At Eyre, on the south coast of Western Australia, a minimum of -3.9°C has been recorded, and at Swansea, on the east coast of Tasmania, the temperature has fallen as low as –4.4°C.

In the tropics, extreme minima below 0°C have been recorded at many places away from the coasts as far north as Herberton, Queensland (–3.3°C). Even very close to the tropical coastline temperatures have fallen to 0°C, a low recording being –0.8°C for Mackay.

The next table shows extreme minimum temperatures recorded at specified stations, including the lowest recorded in each State.

EXTREME MINIMUM TEMPERATURES

(All years to July 1982)

Station	*°C*	*Date*
New South Wales—		
Charlotte Pass	–22.2	14.7.1945 22.8.1947
Kiandra	–20.6	2.8.1929
Kosciusko Hotel	–14.4	3.7.1929 6.7.1939
Cooma	–11.2	13.7.1898
Victoria—		
Mount Hotham	–12.8	13.8.1947
Omeo	–11.7	15.6.1965
Bairnsdale	–7.2	16.8.1896
Queensland—		
Stanthorpe	–11.0	4.7.1895
Mitchell	–9.4	15.8.1979
Nanango	–9.3	16.7.1918
South Australia—		
Yongala	–8.2	20.7.1976
Yunta	–7.7	19.7.1976
Western Australia—		
Booylgoo	–6.7	12.7.1969
Wandering	–5.7	1.6.1964
Tasmania—		
Shannon	–13.0	30.6.1983
Butlers Gorge	–13.0	30.6.1983
Tarraleah	–13.0	30.6.1983
Northern Territory—		
Alice Springs	–7.5	12.7.1976
Tempe Downs	–6.9	24.7.1971
Australian Capital Territory—		
Canberra	–10.0	19.7.1924 11.7.1971

Heat waves. Periods with a number of successive days having a temperature higher than 40°C are relatively common in summer over parts of Australia. With the exception of the north-west coast of Western Australia, however, most coastal areas rarely experience more than three successive days of such conditions. The frequency increases inland, and periods of up to ten successive days have been recorded at many inland stations. This figure increases in western Queensland and north-western Western Australia to more than twenty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves. Marble Bar is the only station in the world where temperatures of more than 37.8°C (100°F) have been recorded on as many as 161 consecutive days (30 October 1923–7 April 1924).

Heat waves are experienced in the coastal areas from time to time. During 11–14 January 1939, for example, a severe heat wave affected south-eastern Australia: Adelaide had a record of 47.6°C on the 12th, Melbourne a record of 45.6°C on the 13th and Sydney a record of 45.3°C on the 14th.

The Kimberley district of Western Australia is the consistently hottest part of Australia in terms of annual average maximum temperature. Wyndham, for example, has an annual average maximum of 35.5°C.

Frost

For details *see* Year Book No. 63, pages 23 to 25.

Humidity

Australia is a dry continent in terms of the water vapour content or humidity of the air and this element may be compared with evaporation to which it is related (*see* page 27). Humidity is measured at Bureau of Meteorology observational stations by a pair of dry and wet bulb thermometers mounted in a standard instrument screen. These measurements enable moisture content to be expressed by a number of parameters, two of which are vapour pressure and relative humidity.

Vapour pressure is an actual quantitative measure whereas relative humidity is a ratio (expressed as a percentage). Both of these are included here showing their respective applications but more detailed treatment is given to relative humidity because of its wider usage.

Vapour pressure. Vapour pressure is defined as the pressure exerted by the water vapour in the air; and it is a measure of the actual amount of water vapour present. The amount of water vapour does not normally vary greatly during the day, although afternoon sea breezes at coastal stations may bring in moisture to increase the vapour pressure temporarily by amounts up to 5 millibars. The 9 a.m. vapour pressure may be taken to approximate the mean value for the day.

The table on page 27 contains average 9 a.m. vapour pressures for selected stations. The annual averages range from 9.5 millibars at Hobart to 27.9 millibars at Thursday Island. At the high level station Kiandra (1,400 metres) the annual average is 7.9 millibars. Excluding Kiandra, monthly averages range from 6.7 millibars at inland stations in winter months to 30.9 millibars at Broome in February.

Vapour pressure together with corresponding air temperature have been used to measure climatic discomfort affecting human beings. Comfortable conditions are generally accepted as being within the vapour pressure range 7–17 millibars with respective air temperatures in the range 15–30°C. Above these limits heat discomfort increases and below them cold discomfort increases. The wet bulb temperature may also be used as a simple measure of heat discomfort when this temperature rises above 20°C.

Relative humidity. Relative humidity at a given temperature is the ratio (expressed as a percentage) of actual vapour pressure to the saturated vapour pressure at that temperature. As a single measure of human discomfort relative humidity is of limited value because it must be related to the temperature at the time.

Since the temperature at 9 a.m. approximates the mean temperature for the day (24 hours), the relative humidity at 9 a.m. may be taken as an estimate of the mean relative humidity for the day. Relative humidity at 3 p.m. occurs around the warmest part of the day on the average and is representative of the lowest daily values. Relative humidity on the average is at a maximum in the early morning when air temperature is minimal.

Relative humidity isopleths for January and July at 9 a.m. and 3 p.m. are shown in Plates 15–18 on pages 25–26, extracted from the *Climatic Atlas of Australia, Map Set 6, Relative Humidity,* 1978.

The main features of the relative humidity pattern are:

(a) over the interior of the continent there is a marked dryness during most of the year, notably towards the northern coasts in the dry season (May–October);

(b) the coastal fringes are comparatively moist, although this is less evident along the north-west coast of Western Australia where continental effects are marked;

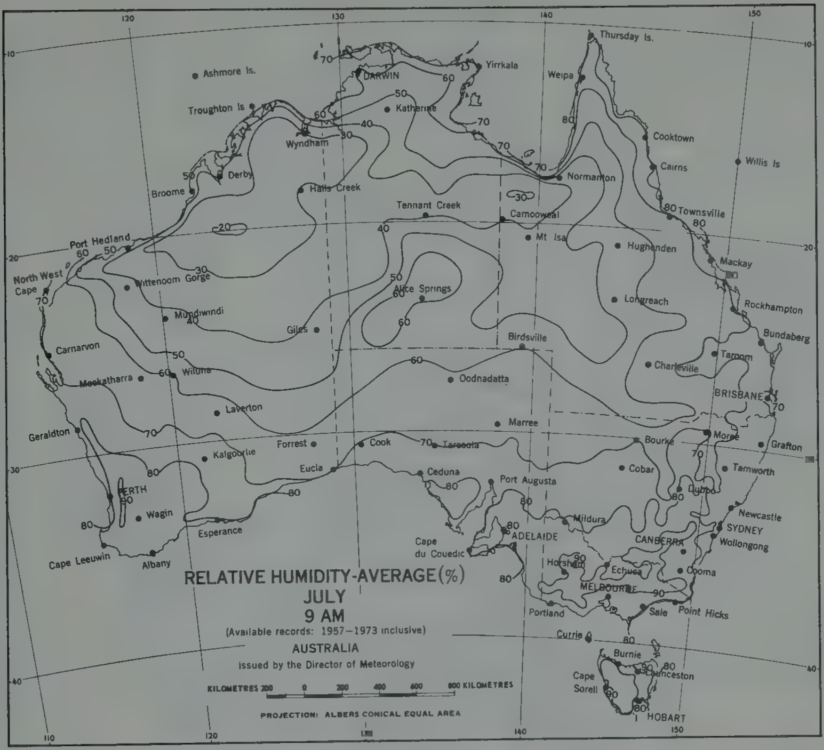
(c) in northern Australia the highest values occur during the summer wet season (December–February) and the lowest during the winter dry season (June–August);

(d) in most of southern Australia the highest values are experienced in the winter rainy season (June–August) and the lowest in summer (December–February).

The table on page 27 contains average relative humidity at 9 a.m. for the year and for each month. Average annual figures on the table range from 34 per cent at Mundiwindi and Marble Bar to 79 per cent at Thursday Island illustrating the range of average relative humidity over Australia. Adelaide has the lowest value for a capital city with an annual average of 60 per cent, compared with Melbourne 69 per cent and Darwin 73 per cent.

Monthly averages shown in the table range from 23 per cent at Mundiwindi in November to 89 per cent at Katanning in June and July. At Alice Springs monthly averages vary from 30 per cent in November to 66 per cent in the winter month of June when low temperatures have the effect of raising relative humidity over the interior. Broome varies from 46 per cent in August to 73 per cent in February, which is a marked seasonal change for a coastal station.

The pattern of variation of relative humidity differs from that of vapour pressure particularly in southern Australia. This is due to the difference in variation of the two parameters with temperature. If the amount of moisture in the air remains constant, vapour pressure decreases slightly with falling temperatures, whereas relative humidity increases. Perth for example has an average 9 a.m. vapour pressure of 14.7 millibars in January and 11.0 in August; and the respective average relative humidity figures (51 and 74 per cent respectively) show a reverse change.


RELATIVE HUMIDITY-AVERAGE (%)
JULY
9 AM
(Available records: 1957—1973 inclusive)
AUSTRALIA
Issued by the Director of Meteorology
Thursday Is.
Ashmore Is.
DARWIN
Yirrkala
Weipa
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is
Normanton
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Townsville
Mt Isa
Port Hedland
Hughenden
Mackay
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Bundaberg
Carnarvon
Birdsville
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
Wollongong
Cape du Couedic
ADELAIDE
CANBERRA
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
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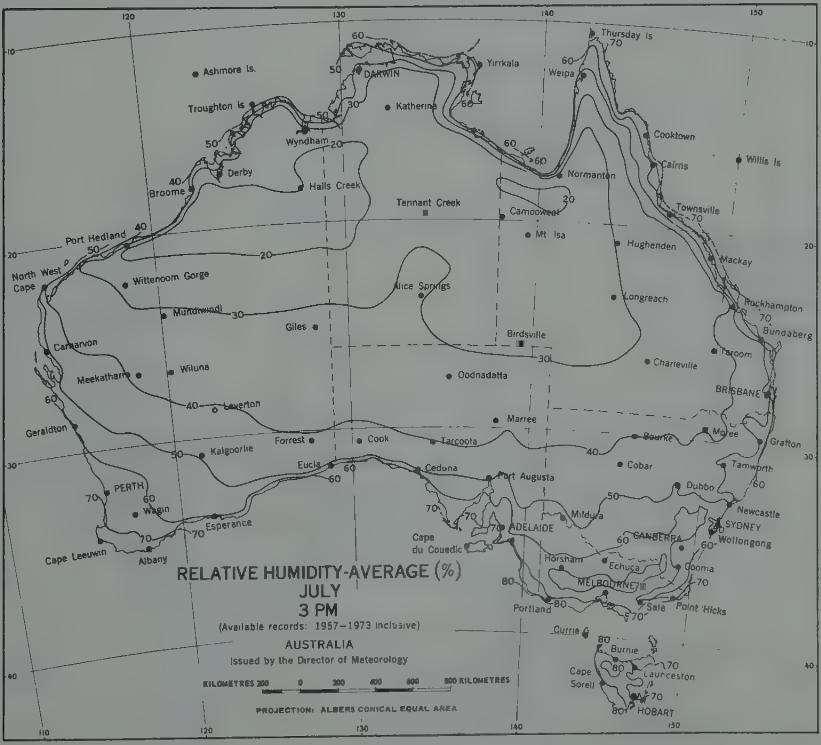
RELATIVE HUMIDITY-AVERAGE (%)
JULY
3 PM
(Available records: 1957—1973 inclusive)
AUSTRALIA
Issued by the Director of Meteorology
Thursday Is
Ashmore Is.
DARWIN
Yirrkala
Weipa
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is
Normanton
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Townsville
Mt Isa
Port Hedland
Hughenden
Mackay
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
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Carnarvon
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Wiluna
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BRISBANE
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Cape Sorell
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
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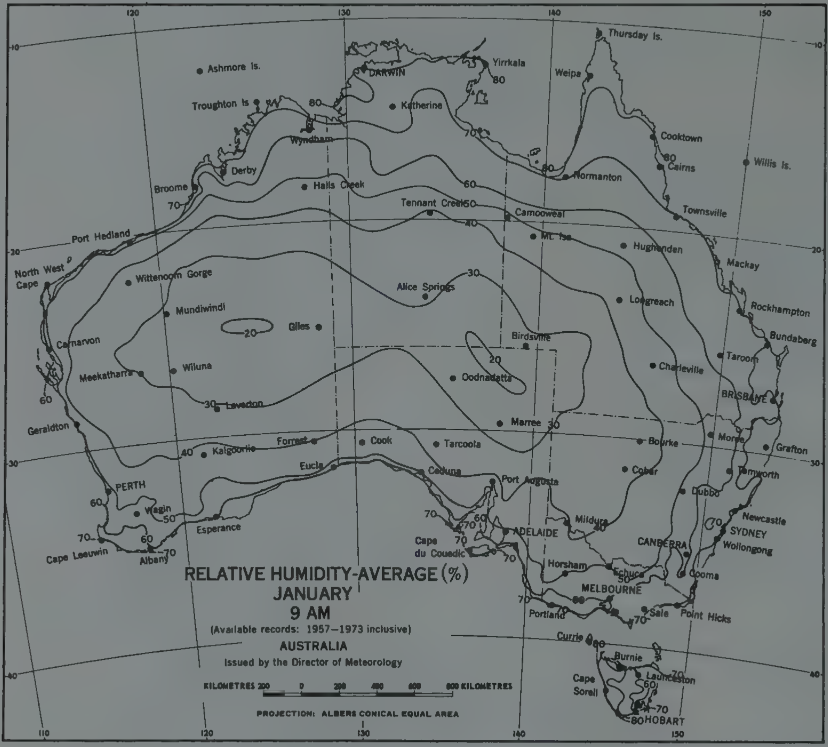
PLATES 15 and 16



RELATIVE HUMIDITY-AVERAGE (%)
JANUARY
9 AM
(Available records: 1957–1973 inclusive)
AUSTRALIA
Issued by the Director of Meteorology

Thursday Is.
Ashmore Is.
Yirrkala
DARWIN
Weipa
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is.
Derby
Normanton
Broome
Halls Creek
Tennant Creek
Townsville
Camooweal
Port Hedland
Mt. Isa
Hughenden
Mackay
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
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BRISBANE
Laverton
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Kalgoorlie
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Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
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Mildura
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Esperance
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Cape Leeuwin
Albany
Cape du Couedic
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Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
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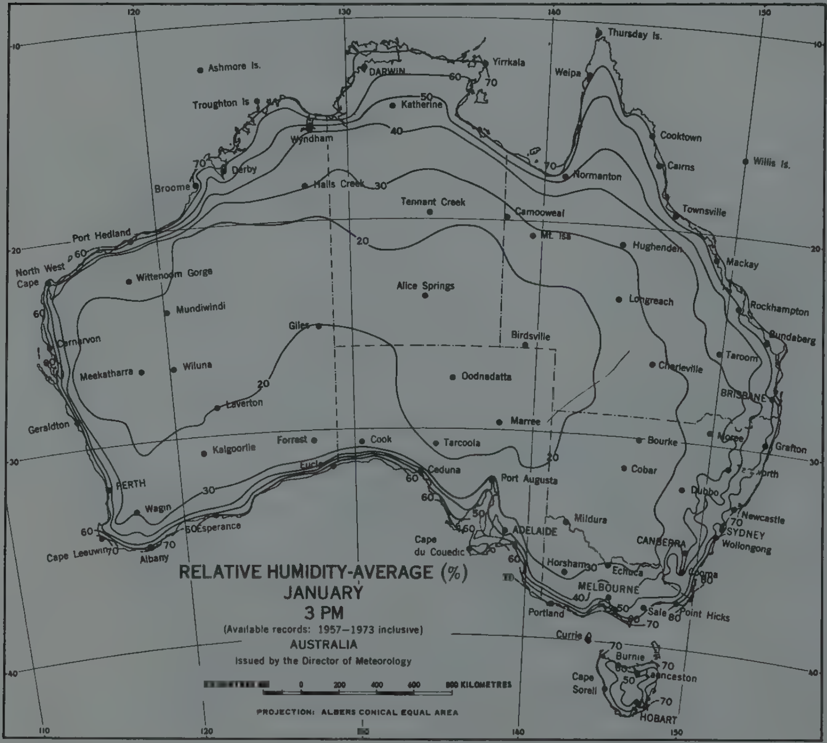

RELATIVE HUMIDITY-AVERAGE (%)
JANUARY
3 PM
(Available records: 1957–1973 inclusive)
AUSTRALIA
Issued by the Director of Meteorology

Thursday Is.
Ashmore Is.
Yirrkala
DARWIN
Weipa
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is.
Derby
Normanton
Broome
Halls Creek
Tennant Creek
Townsville
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Port Hedland
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Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Birdsville
Bundaberg
Carnarvon
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Bourke
Moree
Grafton
Kalgoorlie
Forrest
Cook
Tarcoola
Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
Wagin
Mildura
Newcastle
Esperance
ADELAIDE
SYDNEY
Wollongong
Cape Leeuwin
Albany
Cape du Couedic
CANBERRA
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART
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PROJECTION: ALBERS CONICAL EQUAL AREA
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PLATES 17 and 18

AVERAGE VAPOUR PRESSURE AT 9 A.M.

(millibars)

NOTE. The averages in this and the next table may differ from previously published averages derived from average monthly and annual dry and wet bulb temperatures respectively. This is mainly due to the nature of psychometric formulae and also to differences in the period of record.

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Adelaide . . .	1955–78	13.1	13.6	12.9	11.7	10.9	9.9	9.6	9.6	9.8	10.4	10.9	11.9	11.2
Alice Springs . .	1940–78	12.8	13.7	11.7	9.9	8.8	7.9	7.0	6.7	7.0	8.5	9.5	11.0	9.6
Armidale . . .	1957–78	15.6	15.8	14.4	11.8	9.2	7.8	6.7	7.5	8.6	10.5	11.9	13.7	11.1
Brisbane . . .	1951–78	21.7	22.2	21.3	18.1	14.1	11.9	10.7	11.1	13.1	15.5	17.7	19.8	16.4
Broome	1939–78	30.2	30.9	29.6	22.6	16.2	13.5	12.5	13.1	16.6	21.2	25.3	28.7	21.7
Canberra . . .	1939–78	13.5	14.2	13.1	10.6	8.6	7.3	6.7	7.2	8.4	10.0	10.9	12.1	10.2
Carnarvon . . .	1945–78	20.9	21.9	20.0	17.0	14.2	13.6	12.5	12.2	12.4	13.4	15.7	18.3	16.0
Ceduna	1939–78	14.0	14.5	13.8	12.4	11.2	9.9	9.4	9.8	10.4	10.8	11.6	12.9	11.7
Charleville . . .	1942–78	17.3	18.4	16.4	12.9	10.7	9.5	8.3	8.3	9.1	11.1	12.0	14.7	12.4
Cloncurry . . .	1939–75	21.2	22.8	18.7	13.8	11.0	9.4	8.0	7.7	8.6	11.2	13.2	17.3	13.6
Darwin	1941–78	30.4	30.5	30.2	26.8	21.5	17.8	17.4	20.1	24.4	27.2	28.9	29.9	25.4
Esperance . . .	1957–69	16.1	16.9	15.8	14.7	12.8	12.1	11.1	11.0	11.8	12.6	13.5	14.8	13.6
Halls Creek . .	1944–78	21.7	22.2	18.6	13.0	10.8	8.8	7.5	7.4	8.4	11.5	14.4	18.7	13.5
Hobart	1944–78	11.3	11.6	11.2	10.0	9.0	8.1	7.7	7.7	8.2	9.0	9.6	10.7	9.5
Kalgoorlie . . .	1939–78	13.6	14.3	13.7	12.3	10.9	9.9	9.1	9.1	9.2	10.0	11.1	12.3	11.3
Katanning . . .	1957–78	13.6	14.4	13.6	12.9	11.5	10.6	9.7	10.0	10.4	10.9	11.2	12.2	11.7
Kiandra	1957–74	11.6	11.1	10.5	7.9	6.2	5.6	5.0	5.3	5.7	7.3	8.3	10.3	7.9
Marble Bar . . .	1957–78	22.1	21.8	19.0	13.3	10.3	10.0	8.5	8.1	8.2	10.0	11.7	17.2	13.3
Melbourne . . .	1955–78	13.7	14.7	13.8	11.9	10.5	9.5	8.8	9.0	9.7	10.6	11.4	12.4	11.3
Mildura	1946–78	13.5	14.3	13.4	11.8	10.6	9.3	8.7	9.1	9.8	10.7	11.2	12.1	11.2
Mundiwindi . .	1957–78	14.0	14.8	13.0	11.0	9.0	8.8	7.7	7.2	6.8	8.0	8.9	11.1	10.0
Perth	1942–78	14.7	15.2	14.7	13.6	12.4	11.9	11.1	11.0	11.4	11.2	12.4	13.6	12.8
Sydney	1955–78	19.1	20.0	18.8	15.1	11.8	10.5	9.0	9.6	11.0	13.1	14.9	17.2	14.2
Thursday Island .	1950–78	30.5	30.7	30.6	29.5	28.3	26.1	24.7	24.7	25.1	26.6	28.3	29.9	27.9
Townsville . . .	1939–78	27.2	27.7	26.3	22.4	18.8	15.6	15.2	15.9	17.7	20.7	23.5	25.5	21.4

AVERAGE RELATIVE HUMIDITY AT 9 A.M.

(per cent)

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Adelaide . . .	1955–78	49	51	54	59	69	73	75	71	63	56	53	51	60
Alice Springs . .	1940–78	36	41	42	46	57	66	61	50	36	33	30	31	44
Armidale . . .	1957–78	67	71	72	73	78	80	75	72	64	59	58	59	69
Brisbane . . .	1951–78	67	68	70	69	68	69	66	62	60	59	58	60	64
Broome	1939–78	70	73	69	55	51	50	49	46	48	54	58	64	57
Canberra . . .	1939–78	60	65	68	74	81	84	84	78	72	65	60	56	70
Carnarvon . . .	1945–78	60	60	58	57	60	70	70	63	54	52	55	58	59
Ceduna	1939–78	55	59	62	68	77	82	81	77	66	56	54	54	65
Charleville . . .	1942–78	49	54	54	54	63	71	66	56	45	41	37	41	52
Cloncurry . . .	1939–75	53	61	53	45	47	50	45	37	31	30	32	41	43
Darwin	1941–78	82	84	83	76	67	63	64	68	71	70	73	77	73
Esperance . . .	1957–69	62	67	66	71	76	81	82	76	71	65	62	62	70
Halls Creek . .	1944–78	51	55	44	33	36	35	31	25	22	25	30	40	35
Hobart	1944–78	58	62	65	69	75	78	78	73	65	62	60	55	67
Kalgoorlie . . .	1939–78	48	54	56	62	70	76	75	68	56	50	46	45	58
Katanning . . .	1957–78	59	65	69	77	85	89	89	87	82	70	60	57	74
Kiandra	1957–74	67	68	73	75	83	86	86	85	72	67	63	65	74
Marble Bar . . .	1957–78	47	48	41	33	35	41	37	30	24	24	24	34	34
Melbourne . . .	1955–78	61	65	67	71	77	81	80	75	69	64	62	61	69
Mildura	1946–78	50	56	61	70	82	88	86	79	68	59	53	49	66
Mundiwindi . .	1957–78	32	37	35	37	41	50	47	39	28	25	23	25	34
Perth	1942–78	51	53	57	65	72	78	78	74	68	50	54	51	63
Sydney	1955–78	68	71	72	70	70	73	68	66	63	61	62	65	67
Thursday Island .	1950–78	83	85	85	82	81	80	79	78	75	73	73	77	79
Townsville . . .	1939–78	73	76	74	69	67	66	66	63	60	61	64	66	67

Global radiation

For details *see* Year Book No. 63, pages 25 and 26.

Sunshine, cloud and fog

Sunshine. Sunshine as treated here refers to bright or direct sunshine. Australia receives relatively large amounts of sunshine although seasonal cloud formations have a notable effect on its spatial and temporal distribution. Cloud cover reduces both incoming and outgoing radiation and thus affects sunshine, air temperature and other climatic elements at the earth's surface.

Average daily sunshine (hours) in January and July based on all available data to August 1974 is shown in plates 19 and 20, pages 29–30. Sunshine for April and October and annual amounts are included in the *Climatic Atlas, Map Set 4*. In areas where there is a sparsity of data, estimates of sunshine derived from cloud data were used. Most of the continent receives more than 3,000 hours of sunshine a year, or nearly 70 per cent of the total possible. In central Australia and the mid-west coast of Western Australia totals slightly in excess of 3,500 hours occur. Totals of less than 1,750 hours occur on the west coast and highlands of Tasmania; this amount is only 40 per cent of the total possible per year (about 4,380 hours).

In southern Australia generally the duration of sunshine is greatest about December when the sun is at its highest elevation and lowest in June when the sun is lowest. In northern Australia sunshine is generally greatest about August-October prior to the wet season and least about January-March during the wet season. The table below gives the 20, 50 and 80 percentiles of daily bright sunshine for the months of June and December at selected stations. These values give an indication of the variability of daily sunshine hours. Perth, for example, has a high variability of daily sunshine hours in the wet month of June (160 per cent) and a low variability in the dry month of December (30 per cent). Darwin has a low variability in the dry season month of June (15 per cent) and a high variability in the wet season month of December (85 per cent).*

BRIGHT SUNSHINE, VARIABILITY OF DAILY HOURS, JUNE AND DECEMBER
(20, 50 and 80 percentile values)

Station	Period of record	June Percentile			December Percentile		
		20	50	80	20	50	80
Adelaide	1955–71	1.0	3.5	7.5	4.0	9.0	12.5
Alice Springs	1954–71	5.5	9.5	10.0	6.5	11.0	12.5
Brisbane	1951–71	2.5	8.0	9.5	4.0	8.5	11.5
Canberra	1957–71	2.0	5.0	7.0	4.0	9.5	12.0
Darwin	1951–71	9.0	10.0	10.5	3.5	7.5	10.0
Hobart	1955–71	0.5	3.0	6.0	2.5	7.0	10.5
Melbourne	1955–70	0.5	2.5	6.0	3.0	7.5	11.5
Perth	1945–71	1.0	4.0	7.5	8.5	11.0	12.0
Sydney	1955–71	0.5	6.0	8.0	1.5	7.5	11.0
Townsville	1957–71	4.5	9.0	10.0	5.0	9.5	11.0

Cloud. Seasonal changes in cloudiness vary with the distribution of rainfall. In the southern parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer months. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. Particularly strong seasonal variability of cloud cover exists in northern Australia where skies are clouded during the summer wet season and mainly cloudless during the winter dry season. Cloud coverage is greater near coasts and on the windward slopes of the eastern uplands of Australia and less over the dry interior.

Darwin has the least average daily coverage of 3.2 eighths and Hobart the highest daily average of 5.0 eighths. The highest daily average for any month occurs at Darwin (5.9 eighths for January) and the lowest daily average is also at Darwin (1.1 eighths for August).

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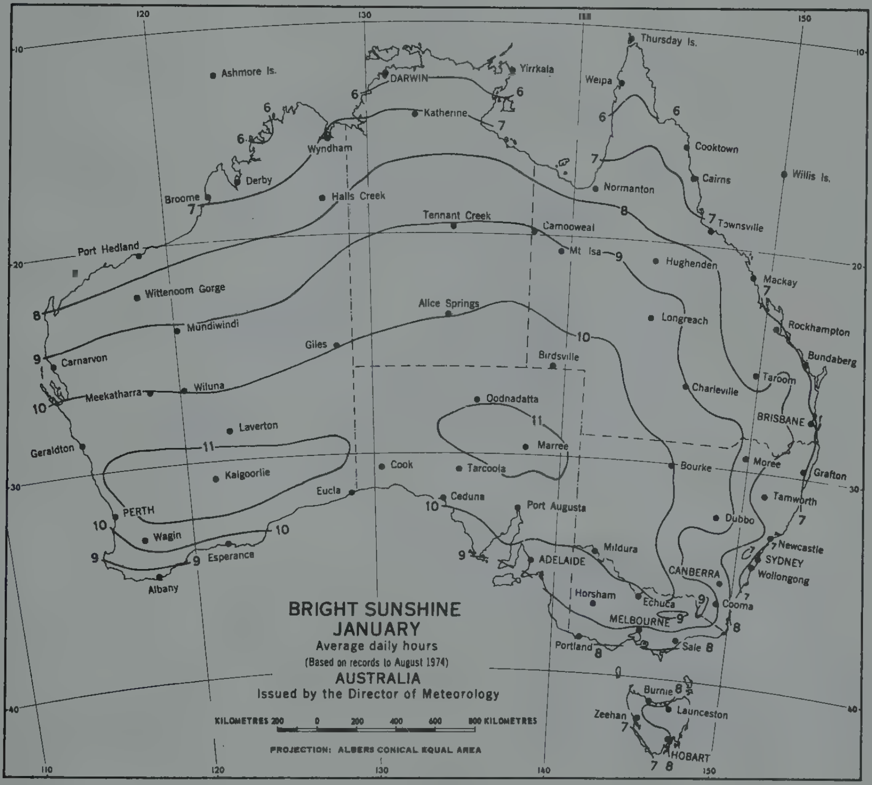
* Variability is given by $\frac{80\ \ 20}{50}$ (percentiles) expressed as a percentage

Fog. The formation of fog depends on the occurrance of favourable meteorological elements—mainly temperature, humidity, wind and cloud cover. The nature of the local terrain is important for the development of fog and there is a tendency for this phenomenon to persist in valleys and hollows. The incidence of fog may vary significantly over distances as short as one kilometre.

Fog in Australia tends to be greater in the south than the north, although parts of the east coastal areas are relatively fog prone even in the tropics. Incidence is much greater in the colder months, particularly in the eastern uplands. Fog may persist during the day but rarely until the afternoon over the interior. The highest fog incidence at a capital city is at Canberra which has an average of 46 days per year on which fog occurs, 28 of which are in the period May to August. Brisbane averages 22 days of fog per year, 17 of which occur between April and September. Darwin averages only 3 days per year, June to September.


BRIGHT SUNSHINE
JANUARY
Average daily hours
(Based on records to August 1974)
AUSTRALIA
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Ashmore Is.
DARWIN
Yirrkala
Katherine
Wyndham
Derby
Broome
Halls Creek
Port Hedland
Wittenoom Gorge
Mundiwindi
Carnarvon
Meekatharra
Wiluna
Giles
Laverton
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Kalgoorlie
PERTH
Wagin
Esperance
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Port Augusta
ADELAIDE
Oodnadatta
Marree
Birdsville
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Tennant Creek
Camooweal
Mt Isa
Thursday Is.
Weipa
Cooktown
Cairns
Willis Is.
Normanton
Townsville
Hughenden
Mackay
Longreach
Rockhampton
Bundaberg
Taroom
Charleville
BRISBANE
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Grafton
Bourke
Tamworth
Dubbo
Newcastle
SYDNEY
Wollongong
CANBERRA
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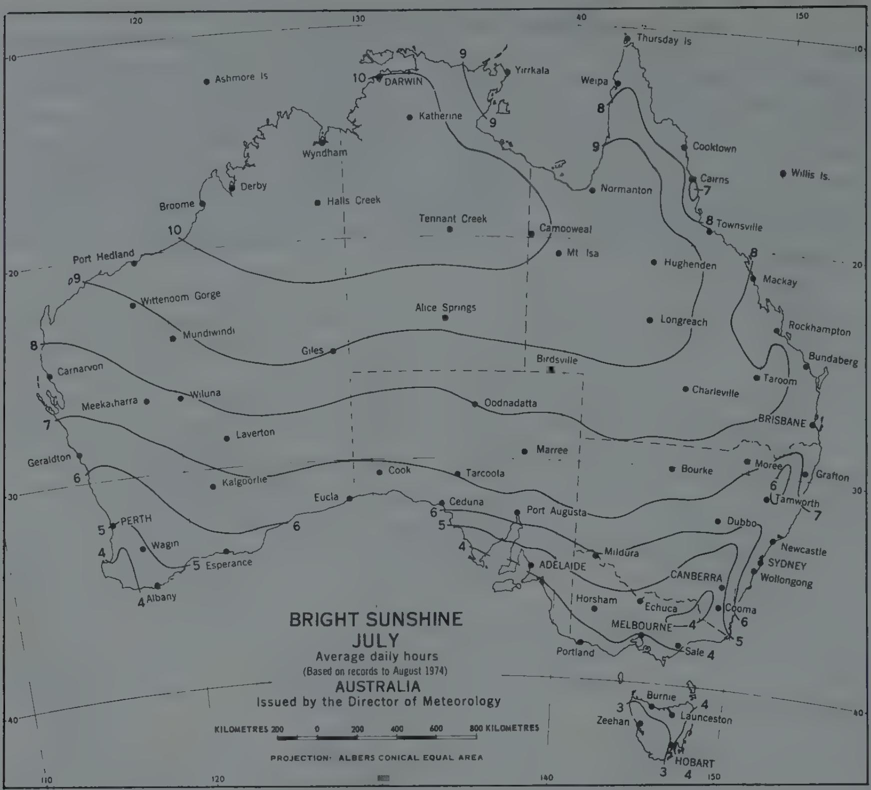
PLATE 19

Winds

The mid-latitude anticyclones are the chief determinants of Australia's two main prevailing wind streams. In relation to the west-east axes of the anticyclones these streams are easterly to the north and westerly to the south. The cycles of development, motion and decay of low pressure systems to the north and south of the anticyclones result in diversity of wind flow patterns. Wind variations are greatest around the coasts where diurnal land and sea breeze effects are important.

Wind roses for the months of January and July at 9 a.m. and 3 p.m. at selected stations are shown in Plates 21–24 inclusive, pages 31–32, extracted from *Climatic Atlas of Australia, Map Set 8*, 1979. The wind roses show the percentage frequency of direction (eight points of compass) and speed ranges of winds.

Orography affects the prevailing wind pattern in various ways such as the channelling of winds through valleys, deflection by mountains and cold air drainage from highland areas. An example of this channelling is the high frequency of north-west winds at Hobart caused by the north-west south-east orientation of the Derwent River Valley.


BRIGHT SUNSHINE
JULY
Average daily hours
(Based on records to August 1974)
AUSTRALIA
Issued by the Director of Meteorology

KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
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Ashmore Is
DARWIN
Yirrkala
Thursday Is
Weipa
Katherine
Wyndham
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Giles
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Bundaberg
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Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
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Geraldton
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Tarcoola
Bourke
Moree
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Tamworth
Eucla
Ceduna
Port Augusta
Dubbo
PERTH
Wagin
Esperance
Mildura
Newcastle
ADELAIDE
SYDNEY
Wollongong
CANBERRA
Albany
Horsham
Echuca
Cooma
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PLATE 20

Perth is the windiest capital with an average wind speed of 15.6 kilometres per hour; Canberra is the least windy with an average speed of 5.8 kilometres per hour.

The highest wind speeds and wind gusts recorded in Australia have been associated with tropical cyclones. The highest recorded gust was 246 kilometres per hour during a cyclone at Onslow, Western Australia on 19 February 1975 and gusts reaching 200 kilometres per hour have been recorded on several occasions in northern Australia with cyclone visitations. The highest gusts recorded at Australian capitals were 217 kilometres per hour at Darwin and 156 kilometres per hour at Perth.

Estimates of the extreme wind gust expected in a given return period* have been derived for places through Australia (Whittingham, 1964). On this basis, for example, Darwin would have an extreme gust for a return period of 10 years of 140 kilometres per hour, Melbourne 135 and Perth 130.

Floods

Widespread flood rainfall may occur anywhere in Australia but it has a higher incidence in the north and in the eastern coastal areas. It is most economically damaging along the shorter streams flowing from the eastern uplands eastward to the seaboard of Queensland and New South Wales. These flood rains are notably destructive in the more densely populated coastal river valleys of New South Wales—the Tweed, Richmond, Clarence, Macleay, Hunter and Nepean-Hawkesbury—all of which experience relatively frequent flooding. Although chiefly summer rains, they may occur in any season.

The great Fitzroy and Burdekin river basins of Queensland receive flood rains during the summer wet season. Much of the run-off due to heavy rain in north Queensland west of the eastern uplands flows southward through the normally dry channels of the network of rivers draining the interior lowlands into Lake Eyre. This widespread rain may cause floods over an extensive area, but it soon seeps away or evaporates, occasionally reaching the lake in quantity. The Condamine and other northern

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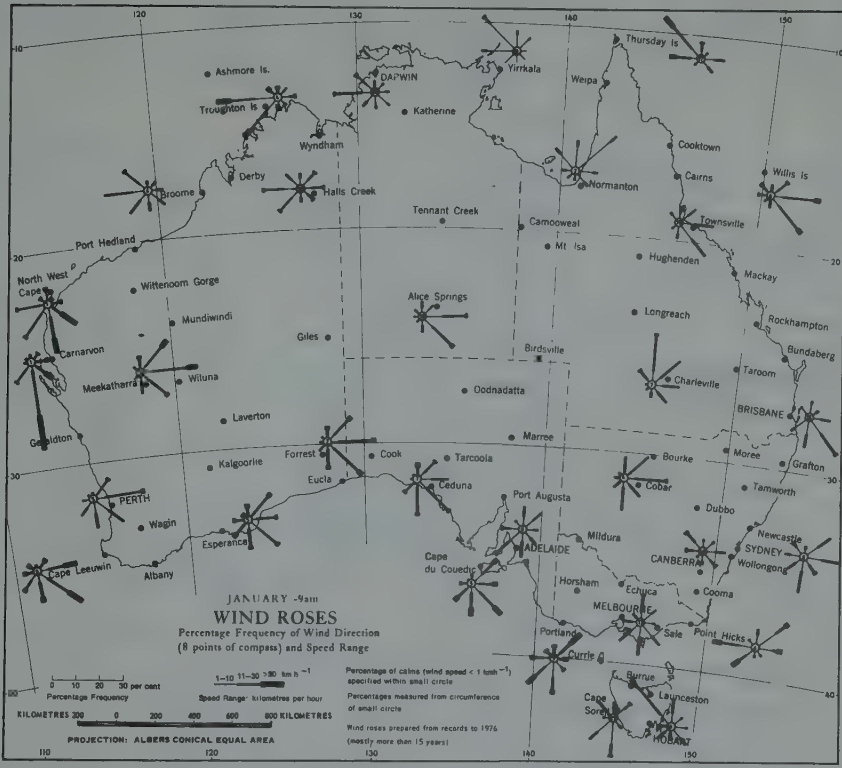
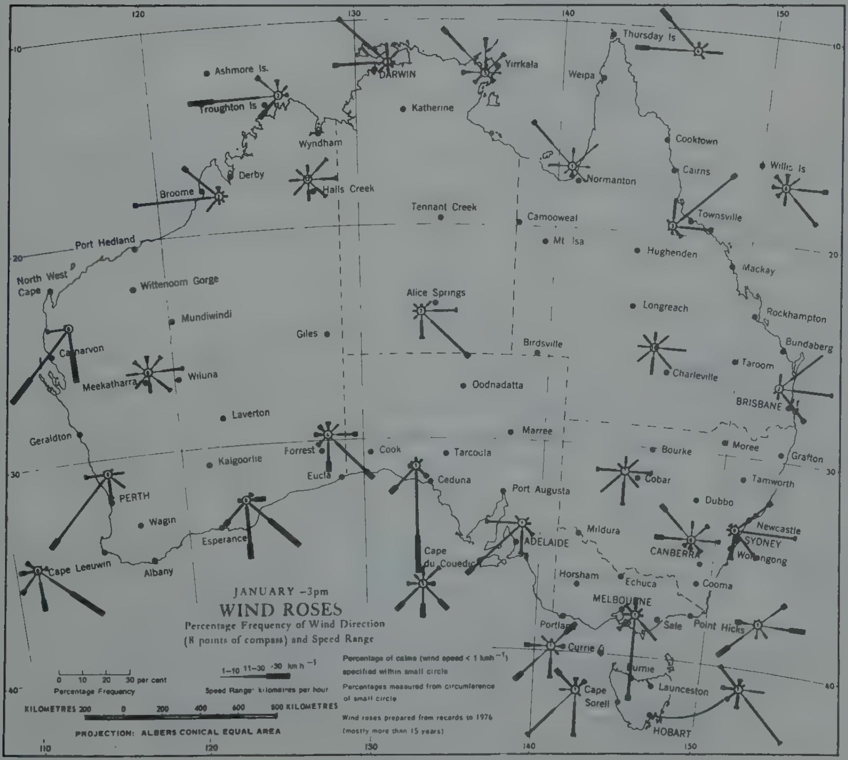
*Return period is the average period between successive occurrences equal to, or greater than, a given speed. For example the extreme wind gust for a return period of 10 years can be expected to occur once in 10 years on the average.


JANUARY -9am
WIND ROSES
Percentage Frequency of Wind Direction
(8 points of compass) and Speed Range
0 10 20 30 per cent
Percentage Frequency
1–10 11–30 >30 km h⁻¹
Speed Range: kilometres per hour
Percentage of calms (wind speed < 1 kmh⁻¹) specified within small circle
Percentages measured from circumference of small circle
Wind roses prepared from records to 1976 (mostly more than 15 years)
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
130
140
150
10
20
30
40
Ashmore Is.
Troughton Is
DARWIN
Katherine
Yirrkala
Thursday Is
Weipa
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Cooktown
Cairns
Willis Is
Normanton
Townsville
Camooweal
Mt Isa
Hughenden
Port Hedland
North West Cape
Wittenoom Gorge
Mundiwindi
Alice Springs
Mackay
Longreach
Rockhampton
Giles
Carnarvon
Birdsville
Bundaberg
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
Port Augusta
PERTH
Dubbo
Wagin
Esperance
Mildura
Newcastle
ADELAIDE
SYDNEY
CANBERRA
Wollongong
Cape du Couedic
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART


JANUARY -3pm
WIND ROSES
Percentage Frequency of Wind Direction
(8 points of compass) and Speed Range
0 10 20 30 per cent
Percentage Frequency
1–10 11–30 >30 km h⁻¹
Speed Range: kilometres per hour
Percentage of calms (wind speed < 1 kmh⁻¹) specified within small circle
Percentages measured from circumference of small circle
Wind roses prepared from records to 1976 (mostly more than 15 years)
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
130
140
150
10
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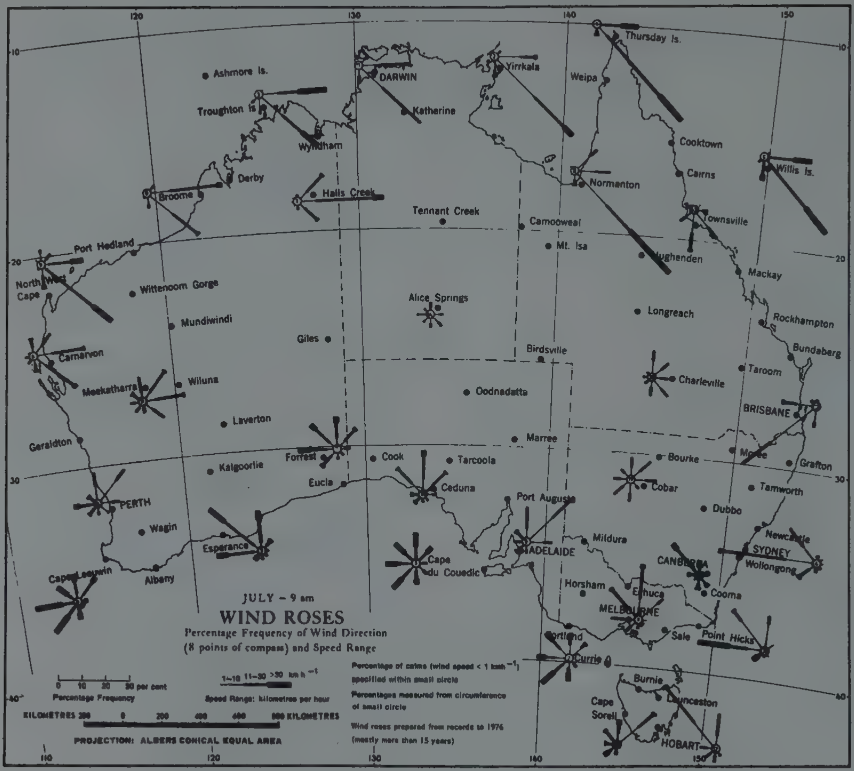
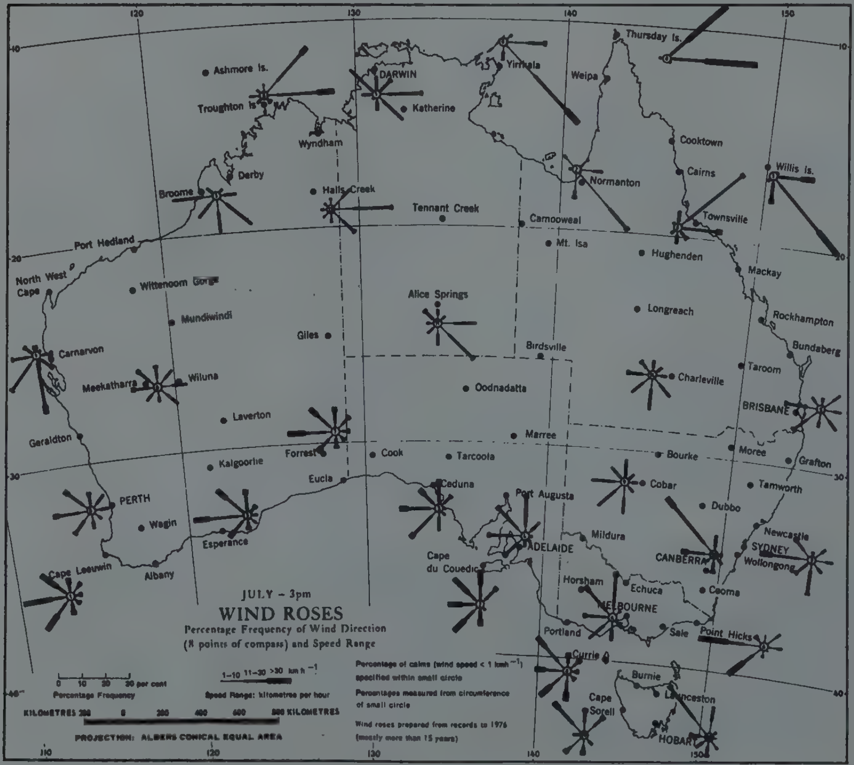
30
40
Ashmore Is.
Troughton Is
DARWIN
Yirrkala
Thursday Is
Weipa
Katherine
Wyndham
Derby
Broome
Halls Creek
Cooktown
Normanton
Cairns
Willis Is
Tennant Creek
Townsville
Camooweal
Mt Isa
Hughenden
Port Hedland
North West Cape
Mackay
Wittenoom Gorge
Mundiwindi
Alice Springs
Longreach
Rockhampton
Giles
Carnarvon
Birdsville
Bundaberg
Taroom
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
Port Augusta
PERTH
Dubbo
Wagin
Esperance
Mildura
Newcastle
ADELAIDE
SYDNEY
CANBERRA
Wollongong
Cape du Couedic
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART

PLATES 21 and 22


JULY – 9 am
WIND ROSES
Percentage Frequency of Wind Direction
(8 points of compass) and Speed Range
0 10 20 30 per cent
Percentage Frequency
1–10 11–30 >30 km h^{-1}
Speed Range: kilometres per hour
Percentage of calms (wind speed < 1 kmh^{-1}) specified within small circle
Percentages measured from circumference of small circle
Wind roses prepared from records to 1976 (mostly more than 15 years)
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
130
140
150
10
20
30
40
Ashmore Is.
Troughton Is.
Wyndham
DARWIN
Katherine
Yirrkala
Thursday Is.
Weipa
Cooktown
Cairns
Willis Is.
Normanton
Townsville
Derby
Broome
Halls Creek
Tennant Creek
Camooweal
Mt. Isa
Hughenden
Mackay
Port Hedland
North West Cape
Wittenoom Gorge
Mundiwindi
Alice Springs
Longreach
Rockhampton
Bundaberg
Giles
Birdsville
Taroom
Carnarvon
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Moree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
Wollongong
ADELAIDE
Cape du Couedic
CANBERRA
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART


JULY – 3pm
WIND ROSES
Percentage Frequency of Wind Direction
(8 points of compass) and Speed Range
0 10 20 30 per cent
Percentage Frequency
1–10 11–30 >30 km h^{-1}
Speed Range: kilometres per hour
Percentage of calms (wind speed < 1 kmh^{-1}) specified within small circle
Percentages measured from circumference of small circle
Wind roses prepared from records to 1976 (mostly more than 15 years)
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
110
120
130
140
150
10
20
30
40
Ashmore Is.
Troughton Is.
DARWIN
Katherine
Yirrkala
Thursday Is.
Weipa
Wyndham
Cooktown
Cairns
Willis Is.
Normanton
Derby
Broome
Halls Creek
Tennant Creek
Townsville
Camooweal
Mt. Isa
Hughenden
Mackay
Port Hedland
North West Cape
Wittenoom Gorge
Mundiwindi
Alice Springs
Longreach
Rockhampton
Bundaberg
Giles
Birdsville
Taroom
Carnarvon
Charleville
Meekatharra
Wiluna
Oodnadatta
BRISBANE
Laverton
Marree
Moree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
Wagin
Esperance
Mildura
Newcastle
SYDNEY
Wollongong
ADELAIDE
Cape du Couedic
CANBERRA
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Cape Sorell
Launceston
HOBART

PLATES 23 and 24

tributaries of the Darling also carry large volumes of water from flood rains south through western New South Wales to the Murray and flooding occurs along their courses at times.

Flood rains occur at irregular intervals in the Murray-Murrumbidgee system of New South Wales and Victoria, the coastal streams of southern Victoria and the north coast streams of Tasmania.

Droughts

Drought, in general terms, refers to an acute water shortage. This is normally due to rainfall deficiency but with other parameters contributing to the actual water availability. The best single measure of water availability in Australia is rainfall; although parameters such as evaporation and soil moisture are significant, or even dominant, in some situations.

Foley (1957) for the period from the commencement of rainfall records in Australia (about 1830) to 1955 lists seven major widespread droughts affecting extensive areas. The drought of 1895–1903 was probably the most disastrous of these in its effects on primary industry. Foley also distinguishes another five droughts affecting wide areas, but of lesser intensity (Foley, pp 204–5).

Gibbs and Maher (1967), having defined a drought year at a specified station as one with the year's rainfall in the first decile range, concluded that the occurrence of areas in the first decile range on annual decile maps for the period 1885–1965 corresponded rather well with drought areas discussed by Foley (1957).

The Bureau of Meteorology commenced the issue of statements on drought in June 1965. These *Drought Reviews* based on rainfall decile criteria are issued monthly when serious or severe deficiencies occur in any of the Australian rainfall districts.

A review of droughts in Australia to 1968 is included in Year Book No. 54, 1968. That review contained a description of the severe drought of 1958–68, making use of the analysis of rainfall deciles. This drought which affected much of eastern Australia was one of the most widespread in recorded Australian history.

Since 1968 there have been a number of severe droughts defined by rainfall deficiencies based on decile analyses (*see Drought Review, Australia* series, 1968–81). Notable of these were the 1970–73 drought over the north-eastern goldfields and adjacent areas of Western Australia, the 1975–76 drought over a large part of south-eastern Australia, and the 1982 drought over Eastern Australia.

One method of assessing the incidence of rainfall deficiency is the analysis of the distribution of annual rainfalls less than the median (Gaffney 1975). The range between the 50 percentile (median) and the 10 percentile gives a measure of the variation in magnitude of annual rainfalls less than the median. The ratio of this range to the 30 percentile value may be used as an index of rainfall deficiency incidence or drought incidence, i.e.:

$$\text{Index of drought incidence} = \frac{50-10}{30} \quad \text{percentile}$$

For example, the indexes for Onslow (north-west coast of Western Australia) and similarly, for Cape Otway (south coast of Victoria) are derived thus:

$$\text{Index for Onslow} = \frac{201-65}{141} \quad \text{mm} = 0.96$$

$$\text{Index for Cape Otway} = \frac{884-723}{813} \quad \text{mm} = 0.19$$

Plate 25 shows the distribution of the index of drought incidence over Australia. The extension of high index values from the interior across New South Wales is significant; and another extension of high index across central Queensland is also notable. In Western Australia the high index over the interior is extensive; and the high values on the north-west coast are chiefly due to the dependence of rainfall on random cyclone tracks.

Climatic discomfort

In Australia climatic discomfort is significant in most areas. During the summer half of the year (November–April) prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical stress. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe for relatively short periods. However, cold stress does not cause prolonged physical hardship in Australia at altitudes lower than 1,000 metres, that is, over more than 99 per cent of the continent.

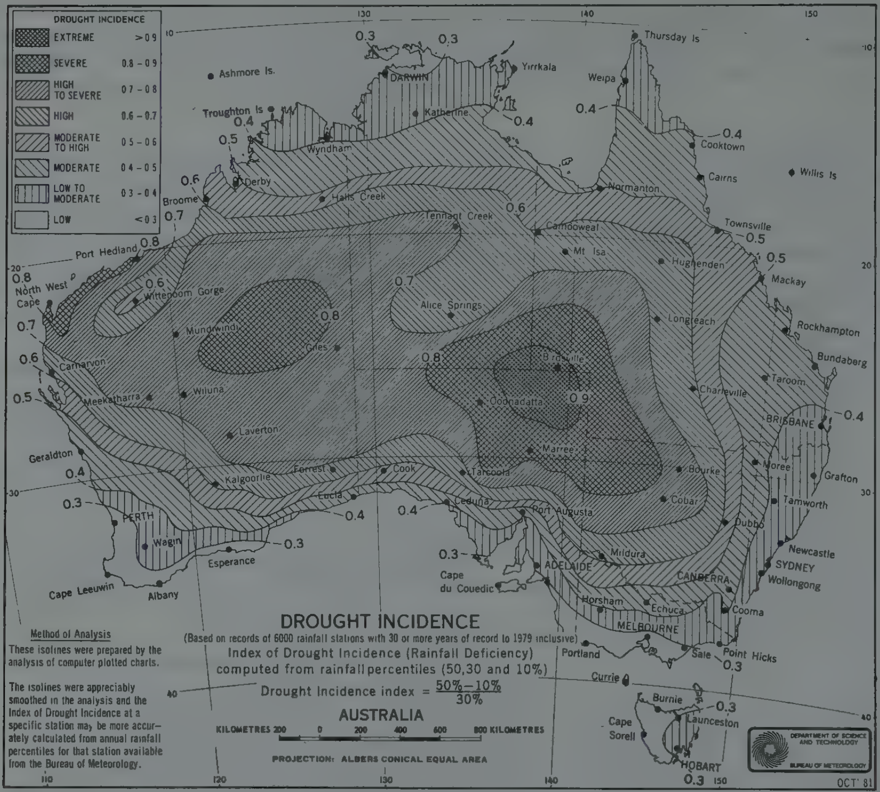

DROUGHT INCIDENCE
EXTREME >0.9
SEVERE 0.8 – 0.9
HIGH TO SEVERE 0.7 – 0.8
HIGH 0.6 – 0.7
MODERATE TO HIGH 0.5 – 0.6
MODERATE 0.4 – 0.5
LOW TO MODERATE 0.3 – 0.4
LOW <0.3
DROUGHT INCIDENCE
(Based on records of 6000 rainfall stations with 30 or more years of record to 1979 inclusive)
Index of Drought Incidence (Rainfall Deficiency)
computed from rainfall percentiles (50,30 and 10%)
Drought Incidence index = $\frac{50\% - 10\%}{30\%}$
AUSTRALIA
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Method of Analysis
These isolines were prepared by the analysis of computer plotted charts.
The isolines were appreciably smoothed in the analysis and the Index of Drought Incidence at a specific station may be more accurately calculated from annual rainfall percentiles for that station available from the Bureau of Meteorology.
DEPARTMENT OF SCIENCE AND TECHNOLOGY
BUREAU OF METEOROLOGY
OCT' 81
110
120
130
140
150
10
20
30
40
Thursday Is
Yirrkala
Weipa
DARWIN
Ashmore Is.
Troughton Is
Katherine
Wyndham
Cooktown
Cairns
Willis Is
Derby
Halls Creek
Normanton
Broome
Tennant Creek
Camooweal
Townsville
Port Hedland
Mt Isa
Hughenden
Mackay
North West Cape
Wittenoom Gorge
Alice Springs
Longreach
Rockhampton
Mundiwindi
Giles
Bundaberg
Carnarvon
Birdsville
Taroom
Meekatharra
Wiluna
Oodnadatta
Charleville
BRISBANE
Laverton
Marree
Geraldton
Forrest
Cook
Tarcoola
Bourke
Moree
Grafton
Kalgoorlie
Eucla
Ceduna
Cobar
Tamworth
PERTH
Port Augusta
Dubbo
Wagin
Esperance
Newcastle
SYDNEY
Wollongong
Mildura
ADELAIDE
CANBERRA
Cape du Couedic
Cape Leeuwin
Albany
Horsham
Echuca
Cooma
MELBOURNE
Portland
Sale
Point Hicks
Currie
Burnie
Launceston
Cape Sorell
HOBART
0.3
0.4
0.5
0.6
0.7
0.8
0.9

PLATE 25

The climatic variables determining physical discomfort are primarily air temperature, vapour pressure and wind. The complete assessment of physical discomfort also requires analyses of such parameters as thermal conductivity of clothing, vapour pressure at the skin and the metabolic heat rate arising from activity of the human body. The cooling system of the human body depends on evaporation of moisture to keep body temperature from rising to lethal levels as air temperature rises. Defining criteria of discomfort is difficult because personal reactions to the weather differ greatly according to a number of variables including health, age, clothing, occupation and acclimatisation (Ashton 1964). However, climatic strain has been measured experimentally and discomfort indexes based on the average response of subjects under specified conditions have been derived.

Effective Temperature. The effective temperature with respect to any environmental combination of temperature, humidity and wind is defined as the temperature of still, saturated air in which a normally clothed sedentary worker would feel the same level of comfort or discomfort.

Environment studies carried out at the research laboratories of the American Society of Heating, Refrigerating and Air Conditioning Engineers established values of effective temperature corresponding to various combinations of temperature, humidity and air movement. The results were published as a series of research reports commencing in 1923, and have been widely used to measure climatic discomfort (*see* 1960 report of the Society).

Normally clothed sedentary workers are mostly comfortable within a range of effective temperatures between 15°C and 27°C (air movement 5–8 metres per minute). At effective temperatures greater than 27°C, the majority of people feel heat discomfort and when less than 15°C they feel cold discomfort.

The table below contains the annual average frequency of effective temperature at 3 p.m. within specified limits at selected stations. The figures provide comparisons of daily occurrence of afternoon discomfort for the given environmental conditions.

CLIMATIC DISCOMFORT: EFFECTIVE TEMPERATURE

Annual average frequency of days when effective temperature at 3 p.m. is lower than 15°C (cold discomfort), within 15–27°C (comfort), and higher than 27°C (heat discomfort). Indoors, normally clothed sedentary workers, air movement 5–8 metres per minute.

Station	*Period of record*	*Average days per year*		
		Less than 15°C	*15–27°C*	*Greater than 27°C*
Adelaide	1955–72	128	234	3
Albury	1962–71	141	220	4
Alice Springs	1955–67	39	300	26
Brisbane	1951–70	6	356	3
Broome	1941–71	0	225	140
Canberra	1940–72	172	192	1
Carnarvon	1945–72	1	345	19
Ceduna	1955–71	77	279	9
Charleville	1942–72	28	316	21
Cloncurry	1940–72	1	268	96
Darwin	1955–69	0	225	140
Hobart	1944–67	239	126	0
Kalgoorlie	1940–72	66	281	18
Marble Bar	1957–71	0	220	145
Melbourne	1955–71	155	207	3
Mildura	1946–72	95	258	12
Perth	1944–71	57	302	6
Rockhampton	1940–72	2	337	26
Sydney	1955–72	69	295	1
Townsville	1941–69	0	333	32
Woomera	1954–72	73	279	13

Heat discomfort, on this index, is greatest in the north-west, where Marble Bar averages 145 days of high heat discomfort annually, and least in the south-east, where Hobart has only one day every five years. Cold discomfort is least in the north, where Townsville has one day of cold discomfort in ten years, and the greatest in the south-east, where Hobart has 239 days annually when the effective temperature is sufficiently low to cause discomfort. By the suitable choice of clothing discomfort can be decreased significantly on cold days. On cold days also, workers tend to take opportunities to move around, thus increasing metabolic heat rates.

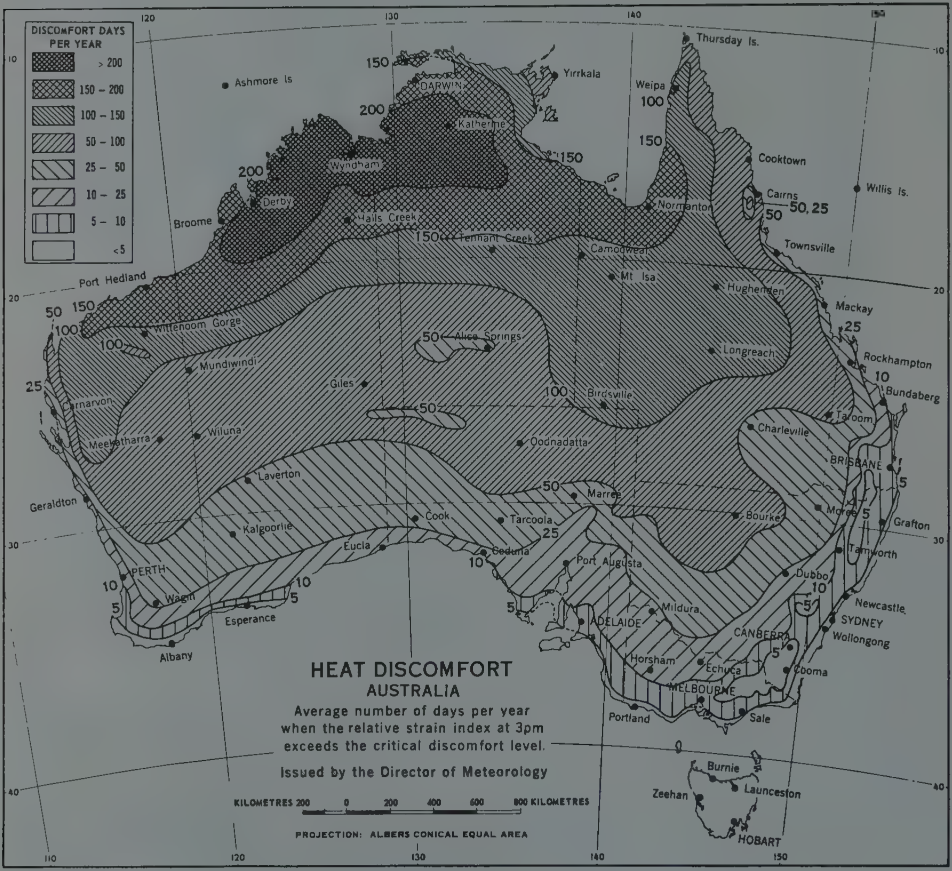
Effective temperature is a useful index but its application is limited because available criteria relate only to indoor workers in sedentary occupations. Futhermore, at lower air temperatures the effective temperature gives excessive weight to humidity.

Relative strain index. The relative strain index derived by Lee and Henschel (1963) has been applied in Australia to measure heat discomfort (Department of National Development and Energy). The results obtained with Australian data are useful for purposes of comparison but interpretation of the actual results is tentative until empirical environmental studies are carried out in this region. In addition to temperature, humidity and air movement the relative strain index has facilities for incorporation of metabolic heat rate, net radiation and insulation of clothing. It has the advantage of being applicable to manual workers under shelter and expending energy at various metabolic heat rates.

The discomfort map plate 26, page 36, shows the average number of days per year when the relative strain index exceeds 0.3 discomfort level at 3 p.m. assuming standard conditions as defined (see table). Maximum discomfort generally occurs around 3 p.m. on days of high temperature.

A notable feature is the lower frequency of days of discomfort in Queensland coastal areas in comparison with the northern coastal areas of Western Australia. This is due to the onshore winds prevailing on the Queensland coast and the cooling effect of the adjacent eastern uplands. Lower frequencies on the Atherton Plateau in the tropics near Cairns show the advantage of altitude. Relatively low heat discomfort frequencies are evident in upland and coastal areas of south-east Australia. Tasmania is entirely in the zone of least discomfort, experiencing on the average less than one day of heat discomfort per year. In Western Australia most of the Kimberley region in the north lies in the highest discomfort zone with the frequencies decreasing southwards to a strip of lowest discomfort towards the south-west coast. A steep gradiant of discomfort frequency on the west coast shows the moderating effect of sea breezes.

The average annual frequency of days when the relative strain index at 3 p.m. exceeds specified discomfort levels is shown in the table opposite. The Sydney frequencies were derived from observations at the Regional Office of the Bureau of Meteorology, which is representative of eastern coastal suburbs; frequencies are higher in western suburbs. The Melbourne frequencies were derived from observations at the Bureau's Regional Office, which may be taken as fairly representative of inner northern and eastern suburbs; frequencies are lower in bayside suburbs. Similarly, in other capital city areas significant variations occur with distance from the coast.


DISCOMFORT DAYS PER YEAR
> 200
150 – 200
100 – 150
50 – 100
25 – 50
10 – 25
5 – 10
<5
HEAT DISCOMFORT
AUSTRALIA
Average number of days per year when the relative strain index at 3pm exceeds the critical discomfort level.
Issued by the Director of Meteorology
KILOMETRES 200 0 200 400 600 800 KILOMETRES
PROJECTION: ALBERS CONICAL EQUAL AREA
Ashmore Is
DARWIN
Katherine
Yirrkala
Wyndham
Derby
Broome
Halls Creek
Tennant Creek
Port Hedland
Wittenoom Gorge
Mundiwindi
Carnarvon
Meekatharra
Wiluna
Giles
Alice Springs
Birdsville
Oodnadatta
Laverton
Kalgoorlie
Geraldton
PERTH
Wagin
Esperance
Albany
Eucla
Cook
Tarcoola
Ceduna
Port Augusta
ADELAIDE
Mildura
Horsham
Echuca
MELBOURNE
Portland
Sale
CANBERRA
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Thursday Is.
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Cooktown
Cairns
Willis Is.
Townsville
Normanton
Camooweal
Mt Isa
Hughenden
Longreach
Mackay
Rockhampton
Bundaberg
Taroom
Charleville
BRISBANE
Marree
Bourke
Moree
Grafton
Tamworth
Dubbo
Newcastle
SYDNEY
Wollongong
Burnie
Launceston
Zeehan
HOBART
110
120
130
140
150
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20
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40

PLATE 26

At inland places, relatively low night temperatures have recuperative effects after hot days. Marble Bar, Western Australia (150 km south-east of Port Hedland) for example, has median minima night minimum temperatures 5–10°C lower than Darwin, except in December-February. Even in this latter period, although median minima at both stations are around 25°C, Marble Bar has median vapour pressures and relative humidities much lower than Darwin (by 10 millibars and 30 per cent respectively).

Acclimatised people would suffer discomfort less frequently than shown by the relative strain index figures. For example, Australians living in the north evidently experience less discomfort at high air temperatures than those in the south, if humidities are comparable.

Both direction and speed of prevailing winds are significant for the ventilation of buildings. In the tropics, for instance, windward slopes allow optimal air movement enabling more comfortable ventilation to be obtained. Regular sea breezes such as those experienced at Perth reduce discomfort although on some days their full benefit may not be experienced until after 3 p.m.

HEAT DISCOMFORT

Average number of days per year when relative strain index (RSI) at 3 p.m. exceeds 0.3 (discomfort) and 0.4 (high discomfort) under standard conditions (indoors, manual activities, light clothing, air movement 60 metres per minute).

Station	*Peroid of record*	*Greater than*	
		0.3 RSI	*0.4 RSI*
Adelaide	1955–72	7	1
Albury	1962–71	8	1
Alice Springs	1955–67	50	4
Brisbane	1951–69	6	<1
Broome	1940–72	155	48
Canberra	1940–72	2	<1
Carnarvon	1945–72	23	3
Ceduna	1955–71	16	3
Charleville	1942–72	42	3
Cloncurry	1940–72	126	28
Darwin	1955–69	165	23
Hobart	1944–67	<1	<1
Kalgoorlie	1939–72	30	5
Marble Bar	1957–71	173	69
Melbourne	1955–71	6	1
Mildura	1946–72	19	3
Perth	1944–72	12	1
Rockhampton	1940–72	33	5
Sydney	1955–72	2	<1
Townsville	1941–69	36	4
Woomera	1954–72	25	3

Climatic data for capital cities

See Year Book No. 67 pages 58 to65.

BIBLIOGRAPHY

American Society of Heating, Refrigeration and Air Conditioning Engineers, *Physiological Principles in Heating, Ventilating and Air Conditioning Guide, Washington*, Vol 38, 1960

Ashton, H. T. *Meteorological Data for Air Conditioning in Australia*, Melbourne, Bureau of Meteorology, Bulletin No. 32, 1964

Australia, Bureau of Meteorology, *Climatic Atlas of Australia*, Melbourne, Series of Maps 1–8, 1974–1979

Australia, Bureau of Meteorology, *Climatic Averages, Australia*, Melbourne, Metric Edition, 1975

Australia, Bureau of Meteorology, *Drought Review, Australia*, Melbourne, No. 1–142, 1965–1982

Australia, Bureau of Meteorology, *Rain Fall Statistics*, Melbourne, Metric Edition, 1977

Australia, Bureau of Meteorology, *Review of Australia's Water Resources: Monthly Rainfall and Evaporation*, Melbourne, 1968

Australia, Department of National Development and Energy, *Atlas of Australian Resources*, Canberra, Second Series, 1970–73

Baldwin, J. L. *Climates of the United States*, Washington, U.S. Department of Commerce, 1973

Egyptian Meteorological Authority, *Annual Meteorological Reports*, Cairo, 1964–71

Foley, J. C. *Droughts in Australia*, Melbourne, Bureau of Meteorology, Bulletin No. 43, 1945

Foley, J. C. *Frosts in the Australian Region*, Melbourne, Bureau of Meteorology, Bulletin No. 32, 1945

Gaffney, D. O. *Rainfall Deficiency and Evaporation in relation to Drought in Australia*, Canberra, ANZAAS Congress, 1975

Gibbs, W. J. and Maher, J. V. *Rainfall Deciles as Drought Indicators*, Melbourne, Bureau of Meteorology, Bulletin No. 48, 1967

Hounan, C. E. *Evaporation in Australia*, Melbourne, Bureau of Meteorology, Bulletin No. 44, 1961

Hoy, R. D. and Stephens, S. K. *The Measurement and Estimation of Lake Evaporation from Four Australian Water Storages*, In Proc. Hydro. Symp. Armidale 19-21 May, Inst. of Engineers, 1975

Lee, D. H. K., and Henschel, A. *Evaluation of Environment in Shelters*, Cincinnati, U.S. Department of Health, Education and Welfare, 1963

Whittingham, H. E. *Extreme Wind Gusts in Australia*, Melbourne, Bureau of Meteorology, Bulletin No. 46, 1964

CHAPTER 3

GENERAL GOVERNMENT

Parliamentary government

Scheme of parliamentary government

Under section 1 of the Australian Constitution the legislative power of the Commonwealth of Australia is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution, has such powers and functions as the Sovereign is pleased to assign to him. In each Australian State there is a State Governor, who is the representative of the Sovereign for the State. The Governor has such powers within the State as are conferred upon him by the Letters Patent constituting his office, and he exercises these powers in accordance with instructions issued to him by the Sovereign, detailing the manner in which his duties are to be fulfilled.

In the Commonwealth Parliament the Upper House is known as the Senate, and in the bicameral State Parliaments as the Legislative Council. The Legislature in each State was bicameral until 1922 when the Queensland Parliament became unicameral upon the abolition of the Upper House. In the Commonwealth Parliament the Lower House is known as the House of Representatives; in the State Parliaments of New South Wales, Victoria, Queensland and Western Australia as the Legislative Assembly; and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The extent of the legislative powers of each of the seven Parliaments is defined by the Australian and State Constitutions respectively. In those States that have a bicameral legislature, the Legislative Assembly or House of Assembly, as the case may be, is the larger House.

The members of the Parliaments of each State are elected by the people, the franchise extending to Australian citizens who are at least 18 years of age and possess certain residential qualifications. For the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to Australian citizens and British subjects who were on the Commonwealth roll as at 25 January, 1984, and who are not less than 18 years of age.

The Sovereign

On 7 February 1952, the then Governor-General of the Commonwealth of Australia and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty took place in Westminster Abbey on 2 June 1953. By the *Royal Style and Titles Act* 1973, which Her Majesty assented to in Canberra on 19 October 1973, the Commonwealth Parliament assented to the adoption by Her Majesty, for use in relation to Australia and its Territories, of the Style and Titles set out in the Schedule to the Act. On the same day, also in Canberra, Her Majesty issued a Proclamation, under the Great Seal of Australia, appointing and declaring that Her Majesty's Style and Titles should henceforth be, in relation to Australia and its Territories, 'Elizabeth the Second, by the Grace of God Queen of Australia and Her other Realms and Territories, Head of the Commonwealth'.

The Governor-General

Powers and functions. As the Queen's representative in Australia, the Governor-General of the Commonwealth of Australia exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on him by the Australian Constitution. Powers that have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth of Australia; to appoint certain officers in the

Diplomatic or Consular Service; to appoint times for holding the sessions of the Parliament, prorogue Parliament, and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or to withhold such assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he may recommend; to exercise executive power; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth of Australia. In addition, the command-in-chief of the Defence Force of the Commonwealth of Australia is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Acts. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force. He has been given power by statute to legislate for certain of the Australian Territories. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

The present Governor-General is His Excellency the Right Honourable Sir Ninian Stephen, A.K., G.C.M.G., G.C.V.O., K.B.E., K.St.J., who has held office since 29 July 1982.

Holders of office. The names of those persons who have held the office of Governor-General since the inception of the Commonwealth of Australia are listed in Year Book No. 61 and earlier Year Books.

Administrators. In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Commonwealth of Australia. Administrators are appointed in the event of the death, incapacity, removal or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. The names of those persons who have acted as Administrator are also listed in Year Book No. 61 and earlier Year Books.

Governors of the States

Powers and functions. The Queen is represented in each of the Australian States by a Governor, the office having been constituted by Letters Patent issued under the Great Seal of the United Kingdom on various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their commissions of appointment and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and other Imperial Acts, as well as under the Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those Bills reserved for the Royal Assent. The latter Bills include certain classes of Bills that are regulated by the State's Constitution and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown in right of the State. In the performance of his functions generally, particularly those conferred by statute, the Governor of a State acts on the advice of Ministers of State for the State.

Holders of office. The names of the present (October 1983) State Governors are as follows:

New South Wales—His Excellency AIR MARSHAL SIR JAMES ANTHONY ROWLAND, K.B.E., D.F.C., A.F.C., K.St.J.

Victoria—His Excellency REAR ADMIRAL SIR BRIAN STEWART MURRAY, K.C.M.G., A.O., K.St.J.

Queensland—His Excellency COMMODORE SIR JAMES MAXWELL RAMSAY, K.C.M.G., K.C.V.O., C.B.E., D.S.C.

South Australia—His Excellency LT-GEN. SIR DONALD BEAUMONT DUNSTAN, K.B.E., C.B.

Western Australia—His Excellency REAR-ADMIRAL SIR RICHARD JOHN TROWBRIDGE, K.C.V.O., K.St.J.

Tasmania—His Excellency SIR JAMES PLIMSOLL, A.C., C.B.E.

Commonwealth Government Ministries

Names and tenure of office, 1901 to 1983. The following list shows the name of each Commonwealth Government Ministry to hold office since 1 January 1901 and the limits of its term of office.

COMMONWEALTH GOVERNMENT MINISTRIES, 1901 TO SEPTEMBER 1983

(i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
(ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
(iii) WATSON MINISTRY, 27 April 1904 to 17 August 1904.
(iv) REID MCLEAN MINISTRY, 18 August 1904 to 5 July 1905.
(v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
(vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909.
(vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
(viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
(ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.
(x) FISHER MINISTRY, 17 September 1914 to 27 October 1915.
(xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
(xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
(xiii) HUGHES MINISTRY, 17 February 1917 to 8 January 1918.
(xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
(xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
(xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
(xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
(xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
(xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
(xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940.
(xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
(xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
(xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
(xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
(xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
(xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
(xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
(xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
(xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
(xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
(xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
(xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
(xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
(xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
(xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
(xxxvi) MCEWEN MINISTRY, 19 December 1967 to 10 January 1968.
(xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
(xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
(xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
(xl) MCMAHON MINISTRY, 10 March 1971 to 5 December 1972.
(xli) WHITLAM MINISTRY, 5 December 1972 to 19 December 1972.
(xlii) WHITLAM MINISTRY, 19 December 1972 to 11 November 1975.
(xliii) FRASER MINISTRY, 11 November 1975 to 22 December 1975.
(xliv) FRASER MINISTRY, 22 December 1975 to 20 December 1977.
(xlv) FRASER MINISTRY, 20 December 1977 to 3 November 1980.
(xlvi) FRASER MINISTRY, 3 November 1980 to 11 March 1983.
(xlvii) HAWKE MINISTRY, 11 March 1983.

Names of Members of each Ministry to 1 September 1983. In Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein. Year Book No. 39 contains a list which covers the period between 9 February 1923, the date on which the Bruce-Page Ministry assumed power, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in issues of the Year Book from No. 39 to No. 61 inclusive and in successive issues from No. 64.

This issue only shows particulars of the First Hawke Ministry (at September 1983).

COMMONWEALTH AND STATE LEADERS OF THE GOVERNMENT, SEPTEMBER 1983

Commonwealth—The Hon. R. J. L. Hawke, A.C., M.P. (Vic.) (A.L.P.)
New South Wales—The Hon. N. K. Wran, Q.C., M.P. (A.L.P.)
Victoria—The Hon. J. Cain, M.P. (A.L.P.)
Queensland—The Hon. J. Bjelke-Petersen, M.L.A. (N.P.)
South Australia—The Hon. J. C. Bannon, M.P. (A.L.P.)
Western Australia—The Hon. B. T. Burke, M.L.A. (A.L.P.)
Tasmania—The Hon. R. T. Gray, M.H.A. (L.P.)
Northern Territory—The Hon. P. A. E. Everingham, M.L.A. (C.L.P.)

THE FIRST HAWKE MINISTRY—AT SEPTEMBER 1983

(The State in which each Minister's electorate is situated is shown in parenthesis).

**Prime Minister*—

THE HON. R. J. L. HAWKE, A.C., M.P. (Vic.)

**Deputy Prime Minister, Minister for Trade and Minister Assisting the Prime Minister for Commonwealth—State Relations*—

THE HON. L. F. BOWEN, M.P. (N.S.W.)

**Leader of the Government in the Senate, Minister for Industry and Commerce and Minister Assisting the Minister for Communications*—

SENATOR THE HON. J. N. BUTTON (Vic.)

**Deputy Leader of the Government in the Senate and Minister for Social Security*—

SENATOR THE HON. D. J. GRIMES (Tas.)

**Minister for Employment and Industrial Relations and Minister Assisting the Prime Minister for Public Service Matters*—

THE HON. R. WILLIS, M.P. (Vic.)

**Treasurer*—

THE HON. P. J. KEATING, M.P. (N.S.W.)

**Minister for Immigration and Ethnic Affairs*—

THE HON. S. J. WEST, M.P. (N.S.W.)

**Minister for Resources and Energy*—

SENATOR THE HON. P. A. WALSH (W.A.)

**Minister for Foreign Affairs*—

THE HON. W. G. HAYDEN, M.P. (Qld)

**Minister for Education and Youth Affairs and Minister Assisting the Prime Minister for Women's Affairs*—

SENATOR THE HON. S. M. RYAN (A.C.T.)

**Attorney-General*—

SENATOR THE HON. G. J. EVANS (Vic.)

**Minister for Defence*—

THE HON. G. G. D. SCHOLES, M.P. (Vic.)

**Minister for Finance and Minister Assisting the Prime Minister for Public Service Matters*—

THE HON. J. S. DAWKINS, M.P. (W.A.)

Minister for Transport—

THE HON. P. MORRIS, M.P. (N.S.W.)

Minister for Primary Industry—

THE HON. J. KERIN, M.P. (N.S.W.)

Minister for Aviation, Special Minister of State and Minister Assisting the Minister for Defence—

THE HON. K. C. BEAZLEY, M.P. (W.A.)

Minister for Housing and Construction and Minister Assisting the Treasurer—

THE HON. C. HURFORD, M.P. (S.A.)

Minister for Sport, Recreation and Tourism, Minister for Administrative Services and Minister Assisting the Minister for Industry and Commerce—

THE HON. J. BROWN, M.P. (N.S.W.)

Minister for Health—

THE HON. N. BLEWETT, M.P. (S.A.)

Minister for Science and Technology—

THE HON. B. O. JONES, M.P. (Vic.)

Minister for Communications—

THE HON. M. J. DUFFY, M.P. (Vic.)

Minister for Home Affairs and Environment—

THE HON. B. COHEN, M.P. (N.S.W.)

Minister for Aboriginal Affairs—

THE HON. A. C. HOLDING, M.P. (Vic.)

Minister for Veterans' Affairs—

SENATOR THE HON. A. T. GIETZELT (N.S.W.)

Minister for Territories and Local Government and Minister Assisting the Prime Minister for Community Development and Regional Affairs—

THE HON. T. UREN, M.P. (N.S.W.)

Minister for Defence Support—

THE HON. B. L. HOWE, M.P. (Vic.)

*Minister in the Cabinet.

COMMONWEALTH AND STATE LEADERS OF THE OPPOSITION, SEPTEMBER 1983

The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in September 1983.

Commonwealth—The Hon. A. S. Peacock, M.P. (L.P.)
New South Wales—N. F. Greiner, M.P. (L.P.)
Victoria—The Hon. J. G. Kennett, M.P. (L.P.)
Queensland—K. W. Wright, M.L.A. (A.L.P.)
South Australia—J. W. Olsen, M.P. (L.P.)
Western Australia—The Hon. R. J. O'Connor, M.L.A. (L.P.)
Tasmania—The Hon. K. S. Wreidt, M.H.A. (A.L.P.)
Northern Territory—The Hon. R. Collins, M.L.A. (A.L.P.)

Numbers and salaries of Commonwealth Government Ministers

Under sections 65 and 66, respectively, of the Constitution of the Commonwealth of Australia the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000 ($24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and at September 1983 the number of Ministers is twenty-six and ministerial salaries range from $19,500 for a Minister not in Cabinet to $42,400 for the Prime Minister. An additional ministerial allowance of $19,500 a year is payable to the Prime Minister, $11,500 a year to the Deputy Prime Minister, $9,750 a year to the Treasurer, the Leader of the House and the Leader of the Government in the Senate, and $8,000 a year to other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* page 49).

Parliaments and elections

The Commonwealth Parliaments

The first Parliament of the Commonwealth of Australia was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation.

COMMONWEALTH PARLIAMENTS

Number of Parliament	*Date of opening*	*Date of dissolution*
First	9 May 1901	23 November 1903
Second	2 March 1904	5 November 1906
Third	20 February 1907	19 February 1910
Fourth	1 July 1910	23 April 1913
Fifth	9 July 1913	30 July 1914 (*a*)
Sixth	8 October 1914	26 March 1917
Seventh	14 June 1917	3 November 1919
Eighth	26 February 1920	6 November 1922
Ninth	28 February 1923	3 October 1925
Tenth	13 January 1926	9 October 1928
Eleventh	6 February 1929	16 September 1929
Twelfth	20 November 1929	27 November 1931
Thirteenth	17 February 1932	7 August 1934
Fourteenth	23 October 1934	21 September 1937
Fifteenth	30 November 1937	27 August 1940
Sixteenth	20 November 1940	7 July 1943
Seventeenth	23 September 1943	16 August 1946
Eighteenth	6 November 1946	31 October 1949
Nineteenth	22 February 1950	19 March 1951 (*a*)
Twentieth	12 June 1951	21 April 1954
Twenty-first	4 August 1954	4 November 1955
Twenty-second	15 February 1956	14 October 1958
Twenty-third	17 February 1959	2 November 1961
Twenty-fourth	20 February 1962	1 November 1963
Twenty-fifth	25 February 1964	31 October 1966
Twenty-sixth	21 February 1967	29 September 1969
Twenty-seventh	25 November 1969	2 November 1972
Twenty-eighth	27 February 1973	11 April 1974 (*a*)
Twenty-ninth	9 July 1974	11 November 1975 (*a*)
Thirtieth	17 February 1976	8 November 1977
Thirty-first	21 February 1978	19 September 1980
Thirty-second	25 November 1980	4 February 1983
Thirty-third	21 April 1983	

(*a*) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General under section 57 of the Constitution.

The thirty-second Parliament opened on 25 November 1980 and ended on 4 February 1983 when both Houses of Parliament were dissolved. Elections for the House of Representatives and for all Senators were held on 5 March 1983. Writs were issued by the Governor-General on 4 February 1983 for the House of Representatives elections in all States and Territories, and for the Senate elections in the Australian Capital Territory and Northern Territory. Writs for the Senate elections in all States but Western Australia were issued on the same date by the State Governors. For voting figures *see* page 47. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections *see* Year Book No. 61 and earlier issues.

Qualifications for membership and for franchise—Commonwealth Parliament

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any Australian citizen, eighteen years of age or over and not disentitled on other grounds, who is, or is qualified to become, an elector of the Commonwealth Parliament. Qualifications for Commonwealth Parliament franchise are possessed by any Australian citizen or British subject who was on the Commonwealth Roll as at 25 January 1984, not under eighteen years of age and not disentitled on other grounds. Residence in a subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Although an exception is made for certain electors overseas and for itinerants, enrolment and voting are compulsory for all eligible persons not covered by these exceptions.

The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding an office of profit under the Crown (with certain exceptions), or having a pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons. Persons convicted of treason and not pardoned, convicted and under sentence for any offence punishable by imprisonment for five years or longer, or persons who are holders of temporary entry permits under the *Migration Act* 1958 or are prohibited non-citizens under that Act are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise. Aboriginals are entitled to enrol and to vote at both Commonwealth and State elections in all States.

Commonwealth Parliaments and elections

From the establishment of the Commonwealth of Australia until 1949 the Senate consisted of thirty-six members, six being returned by each of the original federating States. The Australian Constitution empowers the Commonwealth Parliament to increase or decrease the size of the Parliament, and, as the population of Australia had more than doubled since its inception, the Parliament passed the *Representation Act* 1948 which provided that there should be ten Senators from each State instead of six, thus increasing the total to sixty Senators, enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. The *Representation Act* 1983 further provided for there to be 12 Senators for each state from the first meeting of the thirty-fourth parliament.

The *Senate (Representation of Territories) Act* 1973 made provision for two Senators to be elected from both the Northern Territory and the Australian Capital Territory. Elections for the Territory Senators are held at the same time as general elections for the House of Representatives.

In accordance with the Constitution, the total number of State Members of the House of Representatives must be as nearly as practicable twice the number of State Senators. Consequent upon the increase in the size of the Senate in 1949, the number of State Members was increased from 74 to 121. In 1955 there were 122 State Members; in 1969, 123; in 1974, 124; in 1977, 121; in 1980, 122. From the first meeting of the thirty-fourth Parliament, there will be a further increase flowing from the increase in the number of State Senators to 72.

Redistribution of the States into electoral divisions have taken place in 1949, 1955, 1968, 1974 (Western Australia only), 1977 and 1979 (Western Australia only). The quota (or average number) of electors is the basis for electoral distribution, but the Distribution Commissioners may vary the enrolment of electorates by up to 10 per cent from the quota in order to achieve equality in enrolment midway between redistributions and to take account of communities of interest, including economic, social and regional interests, means of communication and travel, the trend of population changes, physical features and area, and existing boundaries of electoral divisions.

The Electoral Commissioner determines the representation entitlements of the States during the twelfth month of the life of each Parliament. Determinations are based on the latest population statistics as provided by the Australian Statistician. Should the representation entitlement of a State change, the directions of a redistribution is mandatory. The representation entitlements of the States at the four most recent determinations are shown in the following table:

REPRESENTATION ENTITLEMENTS OF THE STATES

State	*1972*	*1977*	*1979*	*1981*
New South Wales	45	43	43	43
Victoria	34	33	33	33
Queensland	18	19	19	19
South Australia	12	11	11	11
Western Australia	10	10	11	11
Tasmania	5	5	5	5
Total	**124**	**121**	**122**	**122**

Following the 1977 determination, Distribution Commissioners were appointed for all States in April and the proposed redistributions were approved by Parliament in October. The proposed redistributions came into effect by force of the *Commonwealth Electoral (Redistribution) Act* 1977. The election of 10 December 1977 was conducted on the basis of the new boundaries. Following the 1979 determination, Distribution Commissioners were appointed for Western Australia in April and the proposed redistribution was approved by Parliament in November 1979. The 1981 determination did not change the representation entitlement of any State, and therefore no mandatory redistribution arose.

From 1922 to 1968 the Northern Territory was represented in a limited capacity by one member in the House of Representatives. In May 1968 the Northern Territory Representation Act was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

From 1948 to 1967 the Australian Capital Territory was represented in a limited capacity by one member in the House of Representatives. The Member for the Australian Capital Territory has had full voting rights since 21 February 1967.

Following the passing of the *Australian Capital Territory Representation (House of Representatives) Act* in October 1973 a Distribution Committee was appointed to distribute the Australian Capital Territory into two electoral divisions. On 19 March 1974, the Committee published an initial redistribution proposal. By early 1974 there was an indication that the House of Representatives would be dissolved before the Distribution Committee could complete its task. Accordingly the *Australian Capital Territory Representation (House of Representatives) Act* 1974 was enacted to provide that the Territory be divided into two electoral divisions, adopting the boundaries recommended by the Distribution Committee. The 1974 and subsequent House of Representatives elections were held on those boundaries.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Year Book.

The *Commonwealth Electoral Act* 1948, enacted with the *Representation Act* 1948 which enlarged the Commonwealth Parliament (*see* page 45), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1980 appear in earlier issues of the Year Book. Additional information is available in the *Election Statistics* issued by the Chief Australian Electoral Officer following each election and printed as Parliamentary Papers.

The numbers of electors and of primary votes cast for the major political parties in each State and Territory at the latest election for each House of the Commonwealth Parliament were as follows:

COMMONWEALTH PARLIAMENT ELECTIONS, 5 MARCH 1983

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
HOUSE OF REPRESENTATIVES ELECTION									
Electors enrolled	3,247,827	2,495,392	1,472,462	880,455	798,973	282,230	57,320	137,405	9,372,064
Number of votes recorded for—									
Australian Labor Party	1,512,012	1,182,118	621,146	393,971	378,545	106,647	20,764	82,189	4,297,392
Liberal Party	951,810	869,542	328,530	342,821	304,677	145,393	..	41,213	2,983,986
National Party(*a*)	330,657	114,065	319,647	7,104	..	..	..	..	771,473
Australian Democrats	144,633	133,183	62,637	56,510	29,273	9,458	1,571	..	437,265
Socialist Workers Party	20,843	11,586	3,565	7,185	2,217	684	..	..	46,080
Country Liberal Party (*b*)	..	..	..	..	..	..	20,479	..	20,479
Democratic Labor Party	..	10,417	..	..	..	..	..	..	10,417
Progress Party	3,732	..	2,920	..	..	..	..	..	6,652
Communist Party	5,510	..	..	888	..	..	..	..	6,398
Socialist Labor League	3,320	1,287	750	..	970	..	..	..	6,327
National Country Party (*a*)	..	..	..	..	5,999	..	..	..	5,999
Socialist Party of Aust.	3,434	..	731	..	..	..	..	..	4,165
National Party of W. Aust.	..	..	..	..	3,686	..	..	..	3,686
Others	40,631	18,753	6,463	5,840	3,263	2,586	1,779	5,229	84,544
Informal votes	66,473	52,780	17,790	22,380	14,685	6,232	2,070	2,902	185,312
Total votes recorded	**3,083,055**	**2,393,731**	**1,364,179**	**836,699**	**743,315**	**271,000**	**46,663**	**131,533**	**8,870,175**
SENATE ELECTION									
Electors enrolled	3,247,827	2,495,392	1,472,462	880,455	798,973	282,230	57,320	137,405	9,372,064
Number of votes recorded for –									
Australian Labor Party	1,298,672	994,471	493,424	340,089	337,417	82,343	20,467	70,433	3,637,316
Liberal/National Party (*b*)	1,045,502	816,116	..	..	..	..	..	..	1,861,618
Liberal Party(*b*)	..	..	187,495	308,138	280,878	106,768	..	40,292	923,571
Australian Democrats	235,712	256,402	98,997	92,585	46,626	17,089	2,359	15,141	764,911
National Party (a)(b)	..	..	363,462	..	..	..	..	..	363,462
Call to Australia	96,065	..	..	..	..	..	..	..	96,065
Bonner	..	..	83,602	..	..	..	..	..	83,602
Democratic Labor Party	..	47,206	..	..	..	..	..	..	47,206
Harradine	..	..	..	..	..	44,696	..	..	44,696
Country Liberal Party (b)	..	..	..	..	..	..	21,406	..	21,406
Progress Party	..	..	10,787	..	..	..	..	..	10,787
Integrity Team	..	3,753	1,963	4,026	..	..	..	..	9,742
National Country Party (a)	..	..	..	..	7,689	..	..	..	7,689
Socialist Workers Party	..	..	..	..	5,452	..	..	..	5,452
Socialist Party of Aust.	3,656	..	..	864	..	..	..	..	4,520
National Party of W. Aust.	..	..	..	..	3,894	..	..	..	3,894
Communist Party	..	..	..	1,058	..	..	..	..	1,058
Others	61,661	19,986	7,591	16,589	598	..	245	1,380	108,050
Informal votes	341,787	255,797	116,858	73,350	60,761	20,104	2,186	4,287	875,130
Total votes recorded	**3,083,055**	**2,393,731**	**1,364,179**	**836,699**	**743,315**	**271,000**	**46,663**	**131,533**	**8,870,175**

(*a*) The National Party of Australia is known as such in all States except Western Australia, where it is known as the National Country Party. (*b*) In New South Wales and Victoria the Liberal Party and National Party candidates stood as one group; in Tasmania and the Australian Capital Territory only the Liberal Party stood as a group; in Queensland, South Australia and Western Australia the National Party/National Country Party and the Liberal Party each stood as separate groups; in the Northern Territory there was a Liberal Party group only. In the Northern Territory the Country Liberal Party (CLP) is affiliated with both the National Party and the Liberal Party; the former CLP MHR for the Northern Territory sat with the National Party while the CLP Senator for the Northern Territory sits with the Liberal Party. Accordingly, CLP votes in the Northern Territory have been allocated to the National Party in the House and to the Liberal Party in the Senate.

The State of the parties in each House at the commencement of the thirty-third Parliament was: *Senate*—Australian Labor Party 30, Liberal Party 24, National Party 4, Australian Democrats 5 and Independent 1; *House of Representatives*—Australian Labor Party 75, Liberal Party 33 and National Party 17. By-elections in Wannon and Bruce in May 1983 and in Moreton in November 1983, did not alter the state of the House of Representatives.

Referendums

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament must be submitted to a referendum of the electors in each State and Territory and must be approved by a majority of the electors in a majority of the States and by a majority of all the voters who voted before it can be presented for Royal Assent.

Since 1901 thirty-six proposals have been submitted to referendums and the consent of the electors has been received in eight cases: the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928, the fourth in respect of Social Services in 1946 and the fifth in respect of Aboriginals in 1967. The remaining three proposals in relation respectively to Senate casual vacancies, maximum retirement age for justices of the High Court and judges of other Federal Courts and the right of electors in the Territories to vote in referendums for the alteration of the Constitution were approved in May 1977. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been held—two prior to Federation regarding the proposed Constitution and two regarding military service during the 1914–1918 War. For further details of referendums *see* Year Book No. 52, pages 66–68, Year Book No. 60, pages 90–91, and Year Book No. 62, pages 72–73.

The Parliaments of the States

This section contains summarised information; for greater detail refer to State Year Books.

Membership of State Parliaments. The following table shows the party distribution in each of the State Parliaments at September 1983.

STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, SEPTEMBER 1983

Party	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*
UPPER HOUSE						
Australian Labor Party (A.L.P.)	24	20	..	9	13	2
Independent (Ind.)	1	..	..	..	..	17
Liberal Party of Australia (L.P.)	12	20	..	11	19	..
National Country Party (N.C.P.) (*a*)	..	..	..	..	1	..
National Party (N.P.)	..	..	..	..	1	..
National Party of Australia (N.S.W.) (N.P.A.)	6	..	..	..	..	..
National Party of Australia (Victoria) (N.P.A.)	..	4	..	..	..	..
Australian Democrats (A.D.)	1	..	..	2	..	..
Total	**44**	**44**	(*b*)	**22**	**34**	**19**
LOWER HOUSE						
Australian Labor Party (A.L.P.)	69	49	25	24	32	14
Independent (Ind.)	4	..	1	..	..	2
Independent Labor (Ind. Lab.)	..	..	..	1	..	..
Liberal Party of Australia (L.P.)	13	23	22	21	20	19
National Country Party (N.C.P.) (*a*)	..	..	..	1	3	..
National Party (N.P.)	..	..	34	..	2	..
National Party of Australia (N.S.W.) (N.P.A.)	13	..	..	..	..	..
National Party of Australia (Victoria) (N.P.A.)	..	9	..	..	..	..
Australian Democrats (A.D.)	..	..	..	..	..	..
Total	**99**	**81**	**82**	**47**	**57**	**35**

(*a*) Formerly the National Alliance Party. (*b*) Upper House abolished in 1922.

For corresponding particulars for the Commonwealth Parliament, *see* page 47.

Number and salaries and allowances of members of the legislatures, Commonwealth parliaments, September 1983

COMMONWEALTH AND STATE PARLIAMENTS: MEMBERS AND ANNUAL SALARIES AND ALLOWANCES, SEPTEMBER 1983

Members in—	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
NUMBER OF MEMBERS								
Upper House	64	44	44	(*a*)	22	34	19	225
Lower House	125	99	81	82	47	57	35	524
Total	**189**	**143**	**125**	**82**	**69**	**91**	**54**	**749**
ANNUAL SALARY (*b*) ($)								
Upper House	(*c*)38,500	25,200	38,000	(*a*)	31,530	34,170	28,621	. .
Lower House	(*c*)38,500	36,000	38,000	38,191	31,530	34,170	28,621	. .
ELECTORAL ALLOWANCES ($)								
Upper House	14,000	(*d*)8,043	11,200–16,240	(*a*)	9,705	(*d*)10,800–22,600	(*d*)3,148–7,441	. .
Lower House	(*e*)14,000–20,300	(*d*)11,490–20,684	(*d*)11,200–16,240	(*d*)9,550–24,630	(*d*)6,105–22,590	(*d*)10,000–21,800	(*d*)4,293–10,017	. .

(*a*) Abolished in 1922. (*b*) Basic rates (payable to backbenchers, etc.) only; additional rates apply for Ministers, etc. (*c*) Certain additional allowances are also provided for holders of parliamentary offices, etc. (*d*) Allowance payable depends on location of electorate and, for Victoria, Tasmania and Western Australia, size of electorate. In N.S.W. a special expense allowance for members of the Lower House of $4,650 or $5,800, is paid to members representing country electorates with members, of the Upper House, who reside in country districts, receiving $4,185 or $7,000 per annum. (*e*) A member of the House of Representatives representing an electorate of less than 5,000 square kilometres receives an electorate allowance at the rate of $14,000 p.a., a member representing an electorate with a population of 140,000 or more receives $17,000 p.a.; a member representing an electorate of 5,000 square kilometres or more receives an electorate allowance at the rate of $20,300 p.a.

Outlay on parliamentary government

The table below shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; *it does not attempt to cover the expenditure on Commonwealth and State administration generally*. Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

OUTLAY ON PARLIAMENTARY GOVERNMENT, 1981–82
($'000)

Expenditure group	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Governor-General or Governor (*a*)	7,410	789	1,385	810	643	745	765	. .	22,345
Ministry (*b*)		1,707	1,711	2,801	829	679	1,000	1,071	
Parliament—									
Upper House (*c*)	4,024	1,282	2,069	. .	1,106	1,496	707	. .	10,685
Lower House (*c*)	7,491	4,401	3,628	2,983	2,116	2,823	1,104	618	25,164
Both Houses (*d*)	37,201	11,887	11,714	5,753	3,512	5,562	3,406	1,021	80,056
Miscellaneous (*e*)	23,109	769	1,709	9,686	2,012	748	350	92	38,475
Total, Parliament	*71,825*	*18,339*	*19,121*	*18,422*	*8,746*	*10,629*	*5,569*	*1,730*	*154,381*
Electoral (*f*)	20,444	6,439	3 860	1,703	502	806	696	148	34,599
Royal Commissions, Select Committees, etc.	3,598	234	1 533	2	109	56	16	. .	5,548
Grand Total	**103,276**	**27,508**	**27,610**	**23,738**	**10,829**	**12,916**	**8,046**	**2,948**	**216,872**

(*a*) Salaries and other expenses, including maintenance of house and grounds. (*b*) Salaries, travelling and other expenses as ministers. (*c*) Allowances to members (including ministers' salaries as members), travelling and other expenses. (*d*) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (*e*) Services, furniture, stores, etc. (*f*) Salaries, cost of elections, etc.

OUTLAY ON PARLIAMENTARY GOVERNMENT

Year	*Cwlth*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.(a)*	*Total*
TOTAL ($'000)									
1976-77	60,698	14,181	12,434	7,616	5,995	7,256	4,525	..	112,705
1977-78	69,830	16,846	13,412	9,823	7,554	8,096	4,650	..	130,210
1978-79	70,424	19,315	16,512	12,516	7,904	9,517	5,382	2,468	144,038
1979-80	74,037	17,794	17,460	13,822	8,922	10,544	6,439	3,629	152,647
1980-81	97,293	19,582	19,290	19,487	9,227	11,180	7,319	4,345	187,723
1981-82	103,276	27,508	27,610	23,738	10,829	12,916	8,046	2,948	216,872
PER HEAD OF POPULATION ($)									
1976-77	4.30	2.85	3.25	3.61	4.68	6.09	10.95	..	7.99
1977-78	4.89	3.35	3.48	4.56	5.84	6.64	11.20	..	9.12
1978-79	4.88	3.81	4.26	5.69	6.08	7.66	12.89	22.60	9.98
1979-80	5.07	3.47	4.48	6.15	6.84	8.35	15.29	32.03	10.46
1980-81	6.57	3.76	4.91	8.44	7.03	8.70	17.21	36.36	12.68
1981-82	6.87	5.22	6.95	9.95	8.17	9.81	18.76	23.42	14.41

(*a*) From 1981-82 more detailed information has been obtained which has allowed a more accurate calculation of the cost of parliamentary government in the Northern Territory. Figures for earlier years on the revised basis are not available.

Commonwealth Government Departments

For current detailed information on the Acts administered, the functions and the organisation of the Departments and Agencies of the Commonwealth Government *see* the *Commonwealth of Australia Gazette* of 1 July 1983.

Acts of the Commonwealth Parliaments

In the Commonwealth Parliament all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Australian Constitution. In all States, other than South Australia and Tasmania, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the Legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal Assent. The Parliaments of the States are empowered generally, subject to the Australian Constitution, to make laws in and for their respective States in all cases whatsoever. Subject to certain limitations they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth Parliament, the latter law prevails and the former law is, to the extent of the inconsistency, invalid.

The enactment/history of Commonwealth Parliament legislation

The legislation passed by the Commonwealth Parliament between 1901 and 1973, and which was then still in operation, is published in a consolidated form entitled *Acts of the Parliament 1901–1973.* Since 1974, annual volumes of Acts have also been published. The consolidation contains a chronological table of Acts passed from 1901 to 1973, showing how they are affected by subsequent legislation or lapse of time, together with a table of legislation of the Commonwealth Parliament passed from 1901 to 1973 in relation to the several provisions of the Australian Constitution. Reference should be made to these for complete information.

The following figures indicate the variation over the years in the number of enactments of the Commonwealth Parliament since 1901 : 17 Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, 156 in 1965, 157 in 1968, 223 in 1973, 166 in 1974, 121 in 1975, 209 in 1976, 161 in 1977, 211 in 1978, 191 in 1979, 177 in 1980, 182 in 1981 and 158 in 1982.

AUSTRALIA'S NEW PARLIAMENT HOUSE

(*This article has been contributed by the Parliament House Construction Authority*)

A symbol of the future is taking shape on Capital Hill in Canberra, the national capital. It is Australia's dramatic new Parliament House, considered by many to be one of the most memorable and exciting architectural projects being undertaken anywhere in the world at this time.

History of the project

The project started in 1979 with the architectural design competition which attracted world wide interest. From 329 entries, ten were selected as prizewinners, five of these subject to further development in the second stage of the competition. The winner was announced on 26 June 1980. It was entry 177 and, at the announcement, the hitherto secret identity of the architectural team behind the submission was revealed. Australian born Richard Thorp was the nominated architect from the American based Mitchell/Giurgola practice. The clarity of the novel design concepts, as formulated under the leadership of Romaldo Giurgola, earned high praise from experts and lay people alike.

In following the extensive competition brief and in trying to meet all the requirements for a functional Parliament House, the design team also paid considerable attention to the original plans for the city of Canberra by its designer, Walter Burley Griffin. Through skilled combination of his intentions and Parliament's modern day requirements, the architects provided a building with the Senate to the east where Burley Griffin's first plan showed the Governor-General's residence and the House of Representatives to the west where the Prime Minister's Lodge was notionally placed by Griffin. Between the two Houses lies the central core of the building enclosed within two large 'boomerang' walls. This core provides the common facilities for both Houses, including the public and ceremonial areas to the northern end and the executive government, committee and library areas to the south.

In the vertical scheme of the building, a similar pattern is found. The basement provides essential services, store areas, plant rooms and the main kitchen. The ground floor is the principal parliamentary and ceremonial floor. It is on this level that the main entry through to the Foyer and Reception Hall lies; whilst, in the heart of the building, the Members' Hall and the two Chambers extend upwards to public gallery levels on the first floor. General circulation levels for staff are on the second floor.

The design

The design of the building has been an evolutionary process. It commenced with the original requirements (as established by the Parliament) based on a survey of the users of the building; it extended through the competition stage and the post competition review referred to as the Schematic Design Report, and culminated in the Developed Design Report, which outlined in detail all aspects of the building. Construction drawings represent the last stage in the process and are being prepared progressively to meet the building programme for each zone or specific trade.

It is a tribute to the skills of the architectural team that so few changes to the original competition entry have been required in the development of the design.

Construction

The construction of the project, like its design, is basically the responsibility of the specially formed Parliament House Construction Authority, set up to design and construct the new Parliament House. This small but expert organisation has attracted highly skilled specialists to supervise the project. The liaison with Parliament is by way of the Joint Standing Committee on the new Parliament House and with Government through the Minister for Territories and Local Government. Actual construction is carried out by individual contractors engaged directly by the Authority, and actual design work by specialist consultants working either directly for the Authority or engaged by the architects. The four principal consultants are the architects, the construction manager, the project planners and the cost planners.

Work on the new Parliament House started in January 1981, when large earthmoving vehicles arrived to cut the top of Capital Hill away and replace much of it around the base to form a building plateau. This nine month operation moved over one million cubic metres of soil with about ten per cent of it being transported from the site for use in a variety of reclamation works in Canberra.

The start of actual construction took place in November 1981 at the foundation level of the Forecourt. However, the relatively slow start at the end of 1981 soon accelerated rapidly through 1982 as the building started to emerge from the foundations, changing the skyline of Capital Hill.

The structure is reinforced concrete poured on-site, with extensive use of pre-cast panels made off-site for the office areas of the Senate, Representatives and executive wings.

Extensive use is being made of Australian materials, including granite for paving and walls, timber in furniture, floors and walls, and carpets in the working areas of the building.

Careful thought has gone into the energy use of the building and advances in technology will allow a central computer to control the building environment, fire protection and lighting.

The working conditions in the new building will be similar to those already existing in modern commercial offices and a far cry from the cramped and uncomfortable accommodation the present Parliament House building provides.

Externally, the building will harmonise well with the city by fitting in logically with the original Burley Griffin style and through skilled landscaping to provide formal garden areas near the building and more traditional Australian "bush settings" near the perimeter of the site.

Steady construction progress during the early part of the project has been achieved with the twin objectives of completing the project by 1988 and working to the original budget of $220 million in May 1978 financial terms. May 1978 prices were used in all cost estimates and provide a permanent reference to ensure the project remains on budget in real terms, allowing only for the effects of inflation and any additional requests by Parliament.

The building has been a major boost to the building industry in Canberra and elsewhere, with an expected peak employment directly on-site of 1,300 people, and with significantly more off-site employment in supply and allied industries. In statistical terms, the project is expected to use 20,000 tonnes of steel, 180,000 cubic metres of concrete and already over half this amount has been incorporated into the structure.

The site is 640 metres in diameter, covers 32 hectares and lies approximately 590 metres above sea level. The roof of the new building 616 metres above sea level, while the tall flagmast will rise a further 80 metres and carry a flag 10 metres by 5 metres. The maximum depth of excavation from the summit of the original hill was 21 metres.

Proposed Completion Date

The project is planned to allow the official opening in 1988 as part of the bicentennial celebrations. However, the building will appear finished externally in 1985 and be ready for gradual occupation from around the middle of 1987.

The building has already attracted considerable attention and when it becomes the new Parliament House of Australia, it will close a chapter of Australia's Parliamentary history in temporary buildings, and open the new era of Australian Parliamentary life in modern, permanent, spacious surroundings.

CHAPTER 4

DEFENCE

This chapter outlines Australia's defence policy and its defence relationships with other countries; the higher defence organisation; the functions, organisation, manning and training of the three Services; the functions and activities of the Defence Science and Technology Organization; the Natural Disasters Organisation; and the functions of the Department of Defence Support.

Further information on current defence planning and activities is available in the Defence report and other publications of the Department of Defence, and in statements to the House of Representatives by the Minister for Defence.

Current defence policy

Australian defence policy is primarily directed to the development of independent and, within resource constraints, increasingly self-reliant defence capabilities to deter and, if necessary, defeat military threats against Australia and its direct interests.

Planning for Australia's defence is not based on meeting particular threats. Rather it recognises that there are a number of possible contingencies which, were they to arise, would have consequences for our security. Particular attention is given to the capabilities of the Defence Force to deal with lesser threats or contingencies, such as limited harassments, raids, incursions, etc., that could arise at short notice and to ensuring that there are options for a future government to expand defence capability in response to changes in the strategic outlook.

Australia maintains close defence relations with numerous allies and friends. Our membership of the ANZUS alliance, the Five Power Defence Arrangements and our Defence Cooperation Programs with friendly nations in South East Asia and the South West Pacific demonstrate Australia's interest in contributing to global and regional stability.

The security and stability of our immediate neighbourhood is of major strategic importance to Australia and the continued development of an independent defence capability enhances our ability to contribute to the peaceful development of that region. Priority in defence activity is consequently given to areas close to Australia and high value is placed on fostering the defence relationship with the countries of South East Asia and the South West Pacific.

The ANZUS alliance remains an important element of our defence policy. Although the Treaty was concluded a generation ago and in a very different strategic environment, the commitments and obligations that were accepted then remain relevant and applicable to contemporary strategic circumstances. The partners acknowledge that the alliance is based on the fundamental precept that the Treaty does not absolve each government from the primary responsibility to provide for its own security to the extent that its resources allow.

Higher defence organisation

Legislation concerning the present organisation of the higher management of the Defence Force and the Department of Defence was passed by the Commonwealth Parliament in September 1975 and became effective on 9 February 1976. It specifically recognised that responsibility for the general control and administration of the Defence Force rests with the Minister for Defence.

Chief of Defence Force Staff: Under section 9 (2) of the *Defence Act 1903* the Chief of Defence Force Staff is vested with the command of the Defence Force. The Chief of Defence Force Staff is the chief military adviser to the Minister and in addition the Chief of Defence Force Staff has, with the Secretary, the joint administration of the Defence Force as specified below.

Secretary, Department of Defence: The Secretary derives his normal administrative powers as a Permanent Head and Chief Officer from the Public Service Act, the Audit Act and Finance Regulations. In addition to these powers, section 9A of the *Defence Act 1903* makes the Secretary and the Chief of the Defence Force Staff jointly responsible for the administration of the Defence Force (except for the matters falling within the command of the Defence Force or any other matter specified by the Minister). The Secretary is the principal civilian adviser to the Minister for Defence and is responsible to the Minister for advice on general policy and on the management and utilisation of defence resources.

Higher Defence Machinery

The *Council of Defence* considers and discusses matters relating to the control and administration of the Defence Force and of the respective Arms of the Defence Force referred to it by the Minister for Defence. The Council is chaired by the Minister for Defence and membership comprises the Minister Assisting the Minister for Defence, the Minister for Defence Support, the Secretary of the Department of Defence, the Chief of Defence Force Staff, the Secretary of the Department of Defence Support and the three Service Chiefs of Staff.

An extensive committee system exists to formulate and provide Defence policy advice to the Minister for Defence, to advise on major matters of administration and to identify the respective Armed Services' operational requirements to meet defence objectives. It is also designed to ensure the sound management of resources, and to enable the interests of the various elements of the Defence organisation to be represented when decisions on resource allocation are taken. The committee system brings together the expertise of both military and civilian members in the policy formulation process and the submission of advice to Government. The more important committees are described below.

The *Defence Committee* is chaired by the Secretary of the Department of Defence, with the Chief of Defence Force Staff, the three Chiefs of Staff, and the Secretaries of the Departments of the Prime Minister and Cabinet, Treasury and Foreign Affairs as members. Representatives of other government departments and agencies may be invited as members or consultants. The Committee advises the Minister for Defence on defence policy as a whole, the co-ordination of military, strategic, economic, financial and foreign affairs aspects of defence policy, and matters of policy or principle and important questions having a joint Service or inter-departmental aspect.

The *Chiefs of Staff Committee*, chaired by the Chief of Defence Force Staff, is responsible for providing the Minister for Defence with collective professional advice on military operations; military implications of defence policy; endorsement of military plans; and other related subjects.

The *Defence Force Development Committee* is chaired by the Secretary of the Department of Defence, with the Chief of Defence Force Staff, the Secretary of the Department of Defence Support and the three Chiefs of Staff as members. It is concerned with advising the Minister for Defence on the formulation of the Five Year Defence Program, annual budget estimates, new major equipment acquisitions, major facilities and other matters relating to force structure and the management of resources.

Defence Review

On 30 April 1981, the then Prime Minister announced in the House of Representatives a major review of the Defence organisation as part of the Review of Commonwealth Functions.

The Committee was chaired by Mr John Utz, Chairman and Chief Executive of Wormald International Ltd.

An interim report on the issue of Departmental organisation was presented at the request of the then Prime Minister in May 1982, and the recommendations were tabled in the Parliament on 7 May 1982.

The Review Committee concluded that there were disadvantages in the large structure of the Defence Department. It recommended the creation of a second Department in the Defence area—a Department of Defence Support. In accordance with the Committee's recommendations, a separate Department of Defence Support was formed, under a Minister for Defence Support.

The final report of the Defence Review Committee was presented to the then Minister for Defence in October 1982, and tabled in the Parliament in November 1982.

Equipment for the Defence Force

An amount of $859.120 million (excluding special purpose B707 aircraft) was spent on equipment of a capital nature in 1982-83. An amount of $1,116.790 million is expected to be spent in 1983-84.

Expenditure on major capital equipment in 1982-83 was dominated by commitments arising from the substantial re-equipment program that the Defence Force is presently undergoing. This program includes 75 McDonnell-Douglas F/A-18 tactical fighter aircraft; four FFG guided missile frigates; 10 additional P3C Orion long range maritime patrol aircraft; PAVETACK target acquisition and tracking systems for the F111 aircraft; 4 and 8 tonne trucks for the Army; a modernisation program for the RAN's three guided missile destroyers; the Australian design, development and manufacture of a new turboprop basic training aircraft for the RAAF; and new 105 mm and 155 mm artillery for the Army.

New major capital equipment items approved during 1982-83 include eight new mortar locating radars for the Army and two Boeing 707 aircraft for RAAF strategic transport requirements. The B707 aircraft have the potential to be later modified for in-flight refuelling.

EXPENDITURE OF DEFENCE FUNCTION
(\$'000)

	Actual expenditure					*Estimated expenditure*
Departmental category	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*
Department of Defence—						
Capital Equipment	406,880	495,731	563,556	500,748	792,758	1,043,058
Capital Facilities	90,828	89,706	116,793	161,737	165,410	191,406
Defence Co-operation	24,600	30,045	37,914	39,676	44,209	45,795
Manpower	1,255,390	1,386,587	1,599,461	2,045,640	2,088,646	2,071,875
Other Running Costs	633,872	788,876	967,616	1,044,268	1,180,569	1,233,671
Total	*2,411,570*	*2,790,945*	*3,285,340*	*3,792,069*	*4,271,592*	*4,585,805*
Department of Defence Support—						
Capital Equipment	10,167	14,190	21,593	32,833	66,362	73,732
Capital Facilities	5,673	8,277	8,014	17,298	38,699	61,075
Manpower	13,986	12,453	15,961	19,196	97,729	98,796
Other Running Costs	71,638	82,277	91,963	112,653	137,945	151,617
Total	*101,464*	*117,197*	*137,531*	*181,980*	*340,735*	*385,220*
Other Departments—						
Capital Facilities	4,442	4,470	8,541	9,180	13,395	15,800
Manpower (including Renumeration Tribunal and Defence Forces Retirement and Death Benefits)	158,277	177,243	200,183	246,056	279,714	315,645
Other Running Costs	18,593	22,710	27,355	34,750	36,612	33,712
Total	*181,312*	*204,423*	*236,079*	*289,986*	*329,721*	*365,157*
Total expenditure on Defence function	**2,694,346**	**3,112,565**	**3,658,947**	**4,264,035**	**4,942,048**	**5,336,182**
Special provisions—						
Acquisition of Special Purpose Boeing 707 aircraft	10,201	3,395	196	289	103	130
Allowance for prospective wage and salary increases	..	..	..	..	..	110,000
Total Defence expenditure	**2,704,547**	**3,115,960**	**3,659,143**	**4,264,324**	**4,942,151**	**5,446,312**

Note: The 1982-83 expenditures and 1983-84 estimates of expenditure for the Department of Defence Support include expenditures previously attributable to the Departments of Defence, Industry and Commerce, Administrative Services and Science and Technology. It is not readily possible to express expenditures for 1978-79 to 1981-82 in a form comparable to that shown for 1982-83 and 1983-84. Expenditures shown for the Department of Defence Support prior to 1982-83 are primarily those for the former Department of Industry and Commerce and the Defence purchasing element of the Department of Administrative Services.

Defence industry

Defence policies in relation to maintenance and development of defence industry capabilities stem from the broader Defence strategic and policy objectives. Defence industry policy recognises that complete self-sufficiency in the supply of the Defence Force's equipment is neither necessary nor practicable for Australia in its current strategic, economic, and technological circumstances. The self-reliant materiel policy adopted by successive Australian governments is illustrated by the balance of local and overseas spending in Defence funding of new capital equipment, replacement equipment and stores, and equipment repair and overhaul.

The complex and expensive platforms and systems (for example advanced military aircraft and missiles) required in limited numbers are imported. The long term trend is for these overseas procurements to absorb some 70 per cent of defence spending on new capital equipment. In the shorter term the balance between local and overseas spending varies in response to changes in accounting arrangements and the timing of payments in relation to particular projects. For example, the proportion of expenditure on capital equipment in Australia rose from 34.9 per cent in 1980-81 to 57.7 per cent in 1981-82, due primarily to reductions in planned payments on Australian purchases under United States Foreign Military Sales arrangements. In 1983-84, concurrent payments for the F/A-18 aircraft, FFG frigates and P3C Orion aircraft are likely to result in the proportion of capital equipment expenditure incurred overseas temporarily exceeding the long term trend.

Australian industry participation in the new tactical fighter (F/A-18) project illustrates the role local industry can play in major overseas procurements. The F/A-18 project provides for designated production tasks on Australian aircraft to be carried out in Australia and for the production of certain components and assemblies by Australian firms to be exported to the US for incorporation in other aircraft. Designated work is intended to enhance the capacity of Australian industry to maintain and repair the aircraft. Designated work in the F/A-18 project comprises local manufacture of representative airframe, avionic, engine and mechanical components. Under these programs orders worth some $550 million will be raised on Australian industry.

The balance of defence spending on capital equipment provides for: selective local design and development equipment; local adaptation of overseas technology to meet a particular Australian requirement; local manufacture or construction of overseas designed capital items (under licence); and purchasing for military use of commercial products manufactured in Australia.

Complete design, development, and manufacture of equipment is undertaken on a selective basis in response to a unique Australian requirement or where there is particular merit in defence or technological terms. In 1982, for example, EMI (Australia) Ltd was awarded a $16 million contract for the production of the MULLOKA sonar system developed specifically for the Australian maritime environment in collaboration with the Defence Science and Technology Organisation. Carrington Slipways Pty Ltd were awarded a contract worth some $23 million in February 1983 for the construction of two prototype minehunting catamarans to an Australian design. However, the weapons systems and some specialised items for the minehunters will be imported. The design and the construction of prototype Australian basic pilot training aircraft is being undertaken by the Australian Aircraft Consortium.

Alternatively, overseas technology may be adapted to particular Australian requirements. Australian industry may be involved at an early stage in the development of the projects to facilitate achievement of high levels of local content. For example, in late 1982, Plessey (Australia) contracted for the development phase of tactical radios for the Army (Project Raven); tenders were received for the Defence Integrated Secure Communications Network (DISCON); and the study phase of the replacement light armoured fighting vehicle (Project Waler) was completed.

Capital equipment designed overseas is also manufactured in Australia under licence. In 1982-83 North Queensland Engineers and Agents Pty Ltd completed the eighth of 14 British-designed but locally built Fremantle class patrol craft under a current contract worth $80 million. Vickers Cockatoo Dockyard is constructing the French-designed replenishment vessel under a contract currently worth $133 million. The Government Ordnance Factories are scheduled to be in production of the UK-designed 105 mm light gun in 1984.

Commercial equipment may be suitable for some military requirements. In 1982-83 the Army took delivery of 253 eight tonne trucks from Mack Trucks (Australia) Pty Ltd under a contract for 940; Mercedes Benz (Australia) Pty Ltd were awarded a contract for 1,295 four tonne trucks and delivered 259 in the same period. As the first step towards replacement of the Army's light vehicle fleet, orders were placed for evaluation vehicles from JRA Ltd, Mercedes Benz (Australia) Pty Ltd and Jeep Australia Ltd.

The second major category of industry related Defence spending is on replacement equipment and stores. The long term trend is for some 70 per cent of defence spending in this category to be incurred in Australia. This funds selective local manufacture of, for example, gun barrels (which require replacement several times in the life of a major equipment), consumable items (including fuel, ammunition and high usage spares), and stores required in large volumes (such as small arms and other personal equipment).

Successive Australian governments have recognised the importance of indigenous maintenance, repair, and modification of equipment to the operational independence of the Defence Force. Australia has invested heavily in the acquisition and maintenance of requisite skills and the provision of facilities to provide comprehensive local support for equipment in the Defence Force inventory. As a result over 90 per cent of defence spending on equipment repair and maintenance is incurred locally. The RAN's six OBERON submarines are being progressively refitted by Vickers Dockyard Pty Ltd at a cost of $30-$40 million each. Similarly, the RAN's six destroyer escorts are being modernized at Williamstown Naval Dockyard at a cost of some $182 million. During 1983 HMAS *Stuart* was recommissioned and work on HMAS *Derwent* is proceeding. The RAAF's Mirage and Macchi aircraft are being refurbished by the local aircraft industry at project costs of $73 million and $22 million respectively.

INDUSTRY RELATED DEFENCE EXPENDITURE IN AUSTRALIA

	1978–79		*1979–80*		*1980–81*		*1981–82*		*1982–83*	
	$m	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*
Capital Equipment—										
Total	417.0		509.9		585.1		533.6		859.1	
Local	127.2	30.5	160.3	31.4	204.2	34.9	307.7	57.7	334.2	38.9
Replacement Equipment and Stores—										
Total	267.8		359.4		442.7		461.6		517.8	
Local	189.3	70.7	252.4	70.2	314.3	71.0	328.8	71.2	356.6	68.9
Equipment Repair and Overhaul—										
Total	87.5		108.2		134.9		159.9		183.5	
Local	80.0	91.4	98.6	91.1	126.3	93.6	146.3	91.5	170.4	92.9
Total Equipment Related Expenditure—										
Total	772.4		977.6		1,162.7		1,155.1		1,560.4	
Local	396.5	51.3	511.3	52.3	644.7	55.4	782.7	67.8	861.2	55.2

Supply and support

Support requirements for defence equipment continue to increase to cater both for the rising costs of supporting older equipment and the higher level of sophistication of new equipment being purchased against an expanded capital equipment program.

Computer support is required to keep pace with a growing defence inventory. Supply minicomputer systems designed to provide stock control and related functions are operating at most Service Supply establishments with links to a central computer in Canberra. An analysis of longer term ADP requirements to support the defence supply system was completed during the year. As a result, redevelopment of the computer-based supply systems, which will rationalise systems on a joint service basis, is planned to coincide with the replacement of computer hardware.

The acquisition of a number of new major capital equipments from overseas sources requires Australia, as a matter of policy, to seek assurances from its suppliers that continued supply and support will be provided in other than peacetime circumstances. Agreements have been either concluded or are under negotiation with those countries which are; or are likely to be, significant suppliers to Australia of defence materiel.

In October 1982, the Government concluded a number of Annexes to the 1980 Memorandum of Understanding on Logistic Support with the United States. These procedural documents cover such matters as technology transfer, and the acceleration of supply arrangements between the two nations. In February 1983, preparation began of another Annex encompassing co-operative arrangements for military airlift support. The Government has also sought to maintain and develop co-operative defence arrangements with its other ANZUS partner, New Zealand, and on 2 June 1983, Australian and New Zealand Ministers signed a Memorandum of Understanding on Closer Defence Logistic Co-operation. The agreement recognizes the advantages of a complementary logistic support capability, including industrial infrastructure, for the manufacture of defence equipment.

Capital facilities

During 1982–83 total expenditure on Capital Facilities was $174 million. Expenditure in 1983–84 is expected to be $191 million.

Emphasis has continued on the development of facilities in the north of Australia. The new patrol boat base at Cairns was officially opened on 28 May 1982. Adjacent land has been leased for a new diesel fuel storage facility. Construction of a new Explosives Storage Facility for HMAS *Cairns* is planned to commence in 1984. A site has been reserved for possible future patrol boat facilities near Port Hedland, W.A. In August 1983, No. 75 Squadron was redeployed from Butterworth, Malaysia, to Darwin, N.T. Facilities costing $1.9 million have been provided to support the squadron. A total of 160 houses were leased by DAS from the local civilian market to accommodate No. 75 Squadron married personnel. Works on an aircraft maintenance complex commenced in 1981 have been completed.

The Learmonth W.A. airfield has undergone improvements to enhance its capacity to accommodate aircraft deployments. Construction of a major airfield at Derby, W.A. is continuing, and the establishment of a F/A–18 base at Tindal, N.T. is under examination.

Other operational bases where new major works are involved include: HMAS *Stirling*, Cockburn Sound—where an armament depot was completed in 1982, and where an Oil Fuel Installation has been recently completed; Army brigade bases at Townsville and Enoggera, Qld and Holsworthy, N.S.W.—where work is almost completed on stages of major development programs; work has commenced on a major redevelopment of the Army Air Defence Regiment base at Woodside, S.A.; RAAF base Amberley, Qld—where additional facilities for the maintenance of F-111C aircraft and ground support equipment were completed in mid-1983; RAAF Base Townsville, Qld—where works to upgrade and refurbish living-in accommodation, messes and medical facilities were authorised and committed in mid-1983 for completion in 1985; RAAF Base Williamtown, N.S.W.—where works in support of the introduction of the F/A–18 Hornet aircraft into RAAF service commenced late in 1983; RAAF Base Richmond, N.S.W.—where work is advanced on a corrosion control facility for aircraft and associated equipment which is due for completion in mid-1984.

Major works on support facilities include Garden Island Dockyard modernisation. A new wharf and fuelling gantry were completed at the Navy Chowder Bay Oil Fuel Installation in February 1983. Buildings under construction in Sydney include a recompression chamber at HMAS *Penguin*, a bridge simulator at HMAS *Watson*, and laboratories for the Inspector of Naval Ordnance at Zetland. The major work of establishing the Naval Supply Centre at Zetland is expected to be completed in 1985-86.

During the year some 280 houses for Servicemen and their families were completed. The construction or acquisition of some further 430 houses was authorised, and it is expected that a further 750 houses (including 105 at Williamtown and 292 replacement houses at Woomera) will be authorised in 1983-84.

Major works at Defence Force educational and training institutions included: continuation of the development of the Australian Defence Force Academy in Canberra; construction of physical training facilities at HMAS *Cerberus*; a fire fighting facility at Jervis Bay, N.S.W., involving two mock-up ships; and a major redevelopment of the Army Armoured Centre at Puckapunyal, Vic.

Defence manpower

Employment

The following table indicates the range of activities and occupations in which defence military and civilian manpower are involved.

FUNCTIONAL DISTRIBUTION OF DEFENCE MANPOWER AS AT 30 JUNE 1983

Function	*Service*	*Civilian*	*Total*
Operational Forces and Logistic Support	31,245	795	32,040
Specialist Support (e.g. communications, medical services)	5,225	4,115	9,340
Stores and Supply: Storage and Control	2,925	4,425	7,350
Equipment production, repair and overhaul	3,495	1,210	4,705
Training	17,105	1,465	18,570
Support to Reserves and Cadets	1,615	150	1,765
Research and Development	250	4,500	4,750
Department of Defence Headquarters and Administration including overseas representation	4,090	3,050	7,140
Department of Defence Regional Commands and Administration	6,690	3,905	10,595
Defence Co-operation	140	5	145
Sub-total	*72,780*	*23,620*	*96,400*
Department of Defence Support—			
Defence Shipyards	..	5,360	5,360
Aerospace Production Facilities	..	2,515	2,515
Munitions Production Facilities	..	6,290	6,290
Administration and Other	..	990	990
Sub-total	..	*15,155*	*15,155*
Total	**72,780**	**38,775**	**111,555**

NOTES: Figures cannot be reconciled with those in earlier Year Books owing to changes within classifications and transfer of civilian staff to the Department of Defence Support. Civilian figures include only full-time operatives and exclude locally engaged civilians employed in support of Air Force deployment overseas, persons on extended leave, and part-time staff.

Permanent Defence Force

PERSONNEL STRENGTHS OF THE PERMANENT DEFENCE FORCE AS AT 30 JUNE

	Navy	*Army*	*Air Force*	*Total*
1978	16,298	31,883	21,689	69,870
1979	16,582	31,813	21,803	70,198
1980	16,961	32,321	22,249	71,531
1981	17,298	32,898	22,322	72,518
1982	17,598	32,876	22,711	73,185
1983	17,198	33,072	22,512	72,782
1984 (approved targets)	16,696	32,677	22,677	72,050

COMPOSITION OF PERMANENT DEFENCE FORCE (*a*) AS AT 30 JUNE 1983

	Navy	*Army*	*Air Force*	*Total*
Male—				
Officers	2,121	4,215	3,396	9,732
Other Ranks	12,848	25,822	16,633	55,303
Cadets	358	494	467	1,319
Apprentices	650	643	506	1,799
Junior Recruits	139	. .	. .	139
Total	*16,116*	*31,174*	*21,002*	*68,292*
Females (*b*)—				
Officers	110	320	191	621
Other Ranks	937	1,547	1,285	3,769
Cadets	35	31	34	100
Total	*1,082*	*1,898*	*1,510*	*4,490*
Total Strength	**17,198**	**33,072**	**22,512**	**72,782**

(*a*) Includes Reserve personnel on full-time duty. (*b*) Excludes female personnel on maternity leave.

Reserve Forces

Reserves comprise trained and partly trained volunteers who are available to participate in the defence of Australia and its interests in times of war or defence emergency. Royal Australian Navy and Royal Australian Air Force Reserves can be used to supplement and increase the rate of effort of the Permanent Forces. The Army Reserve consists mainly of formed units and sub-units, which, with the Regular Army, provide the basis for expansion of the Army.

RESERVE COMPONENTS WITH TRAINING OBLIGATIONS (*a*) AS AT 30 JUNE

	Navy	*Army*	*Air Force*	*Total*
1978	917	23,164	490	24,571
1979	1,037	22,978	498	24,513
1980	1,039	23,986	502	25,527
1981	1,021	31,125	591	32,737
1982	1,094	31,706	873	33,673
1983	1,204	33,227	1,178	35,609

(*a*) Strengths exclude those members who are serving full-time in the Permanent Defence Force but include members who have not fulfilled their minimum training obligations.

Defence co-operation

In support of Australia's defence and foreign policies the Government seeks to foster practical working relationships in the defence field with South-East Asian and South-West Pacific countries. Within the framework of the Five Power Defence Arrangements (Australia, Malaysia, New Zealand, Singapore, United Kingdom) Australia maintains a Defence Force presence in Malaysia with periodic deployments to Singapore (see following section on 'Defence Force Activities Overseas), participates in the Integrated Air Defence System and in multilateral exercises with Five Power partners in the region.

Bilateral activities include exchanges of senior level visits, strategic consultations, combined military exercises and naval visits. We have granted use of certain Australian training facilities to Singapore to meet its own military training requirements. A principal bilateral activity is the Defence Co-operation Programs (DCP). These programs are geared to the needs and priorities of co-operating countries, and emphasise the transfer of skills and technology. Activities include training in Australia, joint projects, loan of Australian personnel, and combined military exercises.

In 1982–83 some 1,141 Service personnel from countries participating in the Defence Co-operation Program were trained in Australia by the three Services or with civil organisations.

Co-operation with Papua New Guinea (PNG) included the provision of Australian Loan Servicemen to PNG, combined exercises, training for PNG Servicemen in Australia, survey and engineering projects in PNG, and the provision of defence equipment. Expenditure in 1982–83 totalled $17.3 million.

In Indonesia major Defence Co-operation projects include maritime patrol assistance (including further Nomad maintenance assistance and an additional Attack Class patrol boat), survey and mapping of Irian Jaya and the islands east and west of Sumatra, dockyard equipment for the Tanjung Uban Naval Base (Riau Islands), and turbine conversion of Sioux helicopters. Together with the provision of training and advisory assistance, total expenditure was $10.2 million in 1982–83.

Assistance to Malaysia in 1982–83 amounted to $4.9 million, mainly for training. Australian advisers in Malaysia provided assistance in the areas of cataloguing, defence research, and the development of an armour/artillery training centre.

Defence Co-operation with Singapore, composed of training and study visits in Australia and advisory assistance (mainly flying instruction) in Singapore, totalled $1.6 million in 1982-83. A similar amount ($1.5 million) was spent on the program with the Philippines in 1982–83 and included Australian advisory teams to assist in establishing a Nomad maintenance system and to support Australian DART target ranges, as well as training and study visits in Australia.

Assistance to Thailand amounted to $3.8 million, mainly towards the provision of four Nomad aircraft, and the maintenance support of existing Nomad aircraft purchased by Thailand.

In 1982–83 expenditure on co-operation with South-West Pacific countries increased to $3.4 million. Activities in the South-West Pacific are not confined to those states with defence forces. They include technical advisory assistance, survey and mapping, hydrography, channel clearance operations, engineering assistance in civil engineering projects, training and equipment assistance.

Defence representation overseas

Australian has resident Defence representation in 16 countries: Britain, China, France, Federal Republic of Germany, India, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Thailand and the United States of America. In addition there is non-resident accreditation in Canada (from the United States of America), Iran (from Pakistan), Nepal (from India), Burma (from Thailand) and Switzerland (from France).

Defence force activities overseas

The main areas where Australian Defence Force elements have been deployed during the year were Malaysia/Singapore, Papua New Guinea, the Middle East and the Indian Ocean. Units also visited the United Kingdom and Western Germany, Indonesia, the Philippines, Japan, the United States, Canada, New Zealand and the South-West Pacific.

Australian Defence Force elements in the Malaysia/Singapore area include:

Navy—A Destroyer or Destroyer Escort is maintained in South-East Asian waters for much of the year. In addition other ships of the RAN visited the area on goodwill visits.

Army—An Australian infantry company is maintained at Butterworth on the basis of three month detachments from Australia, in a training role.

Air Force—One squadron of Mirage fighter aircraft is maintained at Butterworth with periodic deployments to Singapore. Two P3 Orion maritime patrol aircraft are also maintained at Butterworth.

The Defence Force continued to contribute to United Nations peacekeeping operations with Australian Army observers in Kashmir, Egypt, Israel, Syria and Lebanon. In addition, since March 1982 Defence Force personnel have been deployed to Sinai for peacekeeping duties with the Multinational Force and Observers (MFO). An Australian Army Officer has been seconded to the UN HQ in New York for liaison duties.

Five Australian Army instructors have been in Uganda since March 1982, as part of a Commonwealth Military Training Team.

Since mid-January 1981 RAN ships have been deployed for patrol duties in the Indian Ocean and the Arabian Sea. These vessels have also paid goodwill visits to Indian Ocean littoral states.

Under the Defence Co-operation Program elements of the Defence Force have conducted survey and civil engineering operations in neighbouring countries. Major survey operations have been undertaken in Indonesia and Papua New Guinea, and other survey tasks in Malaysia, Fiji, Solomon Islands, Vanuatu, Tonga and Western Samoa. An Army engineer unit is permanently located in the Southern Highlands Province of Papua New Guinea and engineer units have been deployed to Fiji and Solomon Islands.

THE DEFENCE FORCE

Royal Australian Navy

The RAN maintains and exercises a modern, well-equipped and highly-trained maritime force. The structure of this force is based primarily on the provision at sea of a balanced force group, consisting of surface warships, naval aviation and submarines.

Higher organisation

The Chief of Naval Staff has command of the RAN, subject to the command of the Defence Force by the Chief of Defence Force Staff. Principal staff officers to the Chief of Naval Staff are the Deputy Chief of Naval Staff, the Chief of Naval Operational Requirements and Plans, the Chief of Naval Personnel, the Chief of Naval Technical Services, the Chief of Naval Materiel and the Director General of Supply Navy. Other senior officers of the RAN include the Flag Officer Naval Support Command and the Flag Officer Commanding HM Australian Fleet.

Ships of the Royal Australian Navy

The Fleet, September 1983: *Stalwart*—destroyer tender; *Supply*—oiler; *Tobruk*—amphibious heavy lift ship; *Adelaide, Canberra, Sydney*—guided missile frigates; *Perth, Hobart, Brisbane*—guided missile destroyers; *Yarra, Parramatta, Stuart, Swan, Torrens*, (*Derwent* decommissioned—undergoing modernisation at Williamstown)—destroyer escorts; *Vampire*—destroyer training ship; *Jervis Bay*—training ship; *Curlew*—coastal minehunter; *Ibis*—coastal minesweeper; *Moresby, Flinders*—surveying ships; *Cook, Kimbla*—oceanographic research ships; *Otway, Onslow, Ovens, Otama, Oxley, Orion*—submarines; *Attack, Assail, Barbette, Buccaneer, Fremantle, Launceston, Townsville, Warrnambool, Ipswich, Cessnock, Whyalla, Wollongong, Bendigo, Gawler*—patrol boats; *Brunei, Tarakan, Wewak, Betano, Balikpapan*—heavy landing craft. Patrol boats *Adroit, Ardent, Aware, Bayonet* and heavy landing craft *Labuan* are manned by RAN Reserve personnel.

Fleet Air Arm

In March 1983 the government announced that HMAS *Melbourne* would by scrapped and that a replacement carrier would not be acquired. The Minister for Defence, Mr Scholes, also announced that fixed wing aviation in the Fleet Air Arm (FAA) would be phased out by mid 1984 subject to the satisfactory resolution of some problem areas. Fixed wing aviation support for the Navy would in future by provided by the RAAF. The FAA currently operates four squadrons at the RAN Air Station, Nowra, N.S.W.

Equipment for the Royal Australian Navy

The significant new equipment items received by the Navy in 1982–83 include:

- 4 Fremantle Class Patrol Craft (HMAS *Ipswich, Cessnock, Bendigo*, and *Gawler*)
- the third Guided Missile Frigate (HMAS *Sydney*)
- 2 Westland Sea King MK504 helicopters
- 5,644 Barra Sonobuoys
- 4 Self propelled Water/Fuel Lighters
- Recompression Chamber at HMAS *Stirling*
- One River Class Destroyer Escort (HMAS *Stuart*) from Modernisation
- One Oberon Class Submarine (HMAS *Ovens*) from Modernisation.

The Defence Department has invited world wide responses for involvement in a Project Definition Study related to the future acquisition of submarines for the RAN.

Deliveries expected during 1983–84 include:

- Recompression Chamber at HMAS *Penguin*
- Fourth Guided Missile Frigate (HMAS *Darwin*)
- 3 Fremantle Class Patrol Craft (HMAS *Geraldton, Dubbo, Geelong*)

Training and Entry

RAN Staff College. The RAN Staff College located at HMAS *Penguin*, Balmoral, N.S.W., prepares RAN officers of Lieutenant Commander and Lieutenant rank for command and staff appointments. Two courses of 22 weeks duration are run annually, each course comprising 28 students, typically 20 Naval Officers, one officer each from the Army, RAAF, USN and RNZN, two Public Service Board officers and two Defence Co-operation Program students.

HS817 operates Sea King MK50 helicopters in the anti-submarine role; studies are currently underway to examine ways of getting the Sea Kings to sea now that there is no aircraft carrier. *HC723* operates Iroquois UHIB and Wessex 31B helicopters in utility tasks and search and rescue, and also provides the Bell 206B for small ships flights, notably for the survey ship HMAS *Moresby* and to provide helicopter training for FFG destroyers. VC 724 operates 4 of the remaining 10 Skyhawk A4Gs in a limited Fleet support and target towing role. These aircraft will be withdrawn from RAN service in 1984, provided that a suitable target towing alternative is forthcoming. *VC851* operates Tracker S2E/G aircraft in anti-submarine and surveillance tasks and 2 HS748 aircraft fitted for electronic warfare training. Tracker operations beyond mid 1984 are dependent on the outcome of a study into coastal surveillance being conducted by the Minister for Aviation, Mr Beazley. RAN HS748 aircraft may be transferred to the RAAF in late 1984. The RAN also operates Jindivik pilotless target aircraft from the Jervis Bay Range Facility in NSW. Helicopter capable ships in the RAN are the FFGs, *Stalwart, Tobruk* and *Moresby*. The RAN is due to take delivery of the first of 6 Squirrel AS350B light helicopters in May 1984 for use in survey work, light utility tasks and as an interim helicopter for the FFGs.

Ship Construction and Repairs

There are two naval dockyards, one at Garden Island, Sydney and one at Williamstown, near Melbourne. A third yard at Cockatoo Island in Sydney Harbour is operated by Vickers Cockatoo Dockyard Pty Ltd (VCD) under agreement with the Australian Government. This company carries out considerable naval refitting work, particularly of submarines. In August 1979 the company was awarded a contract to construct a new replenishment ship for the RAN the keel of which was laid in August 1980.

Other current construction projects include 5 Patrol Boats being built in Cairns, NQEA, one Guided Missile Frigate in the USA and modernisation of one Destroyer Escort being undertaken by Williamstown Naval Dockyard. A contract for the building of two prototype Minehunter Catamarans and ship building facility was awarded to Carrington Slipways Pty Ltd, Newcastle in January 1983.

Evaluation is continuing on the construction of the two FFG type frigates in Australia.

Work will continue on the construction of:

- HMAS *Success* (AOR-01) at VCD
- 2 Fremantle Class Patrol Boats at NQEA.

Officer Entry. The Royal Australian Naval College at Jervis Bay is the training centre for officers in the RAN. Applicants for permanent commissions (presently male only) must be under 20 years of age on 1 January of the year of entry and must matriculate to a university in an Australian capital city. Officer appointees specialise in Seamen, Engineering, Supply and Secretariat, or Instructor Branch. Appointees either complete a full-time degree course in Engineering, Science, Surveying or Arts at the

University of New South Wales, or complete a Diploma of Applied Science at the Royal Australian Naval College. Applicants for degree studies must meet the entry requirements of the appropriate faculty of the University of New South Wales. Male and female applicants for short service commissions must be under 24 years of age on 1 January of the year of entry and have either matriculated to a degree course at an Australian university, College of Advanced Education, or Institute of Technical and Further Education, or achieve four passes at Year 12. Entry is also available to professionally qualified persons such as doctors, teachers, engineers and lawyers.

Sailor Entry. There are several entry schemes available, depending upon an individual's age, educational standard and interests. New entry training is carried out at the following establishments:

- HMAS *Nirimba* at Quaker's Hill, New South Wales, is the primary establishment for all RAN trade training which includes courses for apprentices aged between fifteen and eighteen, general entry personnel and direct entry tradesmen.
- HMAS *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment for male entrants aged between fifteen-and-three quarters and sixteen-and-a-half.
- HMAS *Cerberus* at Westernport, Victoria is the training establishment for general entry members aged between seventeen and twenty-six. Recruits receive twelve weeks initial basic training before progressing to branch training courses.

Advanced branch training is also undertaken at the various schools at HMAS *Penguin*, and HMAS *Watson* in Sydney, and the Naval Air Station at Nowra, New South Wales. A number of specialist courses are conducted in the United Kingdom and United States.

Australian Army

The Australian Army maintains a potential ability and readiness to conduct operations on land for the defence of Australia and, in co-operation with the other arms of the Australian Defence Force, shares a responsibility to deter aggression, to ensure the nation's security and to preserve its national interests.

Higher Organisation

Command of the Army is the responsibility of the Chief of the General Staff, subject to the overall command of the Defence Force by the Chief of Defence Force Staff. He has for his principal staff officers the Deputy Chief of the General Staff, the Chief of Operations, the Chief of Personnel, the Chief of Logistics, the Chief of Materiel and the Chief of the Army Reserve.

The Army is organised into three commands as follows:

- *Field Force Command* which commands all field force units of the Australian Army, both Regular and Army Reserve.
- *Logistic Command* which commands the principal logistic elements of the Army.
- *Training Command* which is responsible for all individual training and commands all Army training establishments and schools with the exception of the Royal Military College, Duntroon (which is under the command of the Chief of the General Staff).

Military Districts as listed below provide administrative support for the three commands, and, in certain cases act as intermediate headquarters for them:

- *1st Military District*—the State of Queensland.
- *2nd Military District*—the State of New South Wales, less those parts included in 3rd and 4th Military Districts.
- *3rd Military District*—the State of Victoria and part of southern New South Wales.
- *4th Military District*—the State of South Australia plus a portion of south-western New South Wales.
- *5th Military District*—the State of Western Australia.
- *6th Military District*—the State of Tasmania.
- *7th Military District*—the Northern Territory.

The military district headquarters also handle those matters in which both Commonwealth and State Governments are involved.

Training

Officer Training. The Army currently utilises a number of training sources to meet the requirements for commissioned officers. These are:

- *Royal Military College*. Located at Duntroon in the Australian Capital Territory, this college provides military and tertiary training for officers for the Regular Army.
- *Officer Cadet School*. Located at Portsea in Victoria, the school is a source of commissioned officers for the Regular Army. Graduates do not undertake tertiary studies during the course.

PLATE 27

Graduation parade, Royal Military College, Duntroon

- *Women's Royal Australian Army Corps School*. Located at Mosman in New South Wales this school is a source of commissioned officers for the Regular Army. Graduates do not undertake tertiary studies during the course.

  Note: With the commencement of the Australian Defence Force Academy courses in 1986 all of the above courses will be amalgamated and conducted at the Royal Military College with the exception of tertiary studies and some military training.
- *Officer Cadet Training Units*. These units are located in each Military District and are the major source of commissioned officers for the Army Reserve.
- *University Regiments*. University Regiments provide officer training for members of the Army Reserve. These courses are designed to meet the requirements of undergraduate enlistees.

Command and Staff College. Located at Queenscliff in Victoria, the college provides advanced training for selected Australian and overseas officers, to prepare them for command and staff appointments in the rank of lieutenant colonel.

Other Rank Training. Initial training for other ranks is conducted as follows:

- *1st Recruit Training Battalion*. Located at Kapooka NSW this unit is the major training establishment for male recruits enlisted into the Regular Army.
- *Women's Royal Australian Army Corps School*. This unit, in addition to training female officer cadets, trains female recruits enlisted into the Regular Army.
- *Army Apprentices School*. Recently moved from Balcombe to Bonegilla in Victoria, this school provides initial trade and military training for apprentice enlistees.
- *Army Reserve*. Army Reserve recruits attend initial training at courses conducted by either Training Groups located in most Military Districts or units.

Land Warfare Centre. The Land Warfare Centre at Canungra, Qld, conducts courses for both officers and other ranks as follows:

- promotion subjects;
- tactics and administration;
- individual battle skills; and
- sub-unit operations.

Other Schools. Army schools have been established to train officers and other ranks in up to date techniques of their own arm or service. Courses conducted include training, promotion courses and instructor development. Courses are conducted for members of both the Regular Army and the Army Reserve.

Equipment for the Army

Significant new equipment items received by Army in 1982-83 included 264 eight tonne and 140 four tonne cargo trucks, six 105 mm light field guns (and 5,000 rounds of ammunition), 69 sustained fire machine guns, 215 light field vehicles, eight heavy cranes, 26 medium vibrating rollers, 13 fire fighting trucks and 46 compressors. Deliveries expected during 1983-84 include 209 eight tonne and 378 four tonne cargo trucks, 150 sustained fire machine guns and four fire fighting trucks.

Royal Australian Air Force

The function of the Royal Australian Air Force is the conduct of operations in the air for the defence of Australia and Australian interests.

Higher Organisation

The Chief of the Air Staff (CAS) has command of the Royal Australian Air Force subject to the overall command of the Defence Force by the Chief of Defence Force Staff. The CAS is assisted in his decisions by an advisory committee which includes the Deputy Chief of the Air Staff, Chief of Air Force Personnel, Chief of Air Force Technical Services, Chief of Air Force Development, Chief of Air Force Materiel, Air Officers Commanding Operational and Support Commands, Director General Supply—Air Force, Assistant Secretary Resources Planning, and other officers or specialists as may be directed by the CAS. The Committee has no statutory authority nor executive function and the CAS is not obliged to accept its recommendations.

The Chief of Air Staff administers and controls RAAF units in Australia through the two commands. Operational Command is responsible to the CAS for the command of operational units and the conduct of their operations within Australia and overseas. Operational units based at Butterworth, Malaysia, contribute to the development of the Malaysian and Singapore defence capability and provide forces for the Integrated Air Defence System. Support Command is responsible to the CAS for training of personnel, and the supply and maintenance of Service equipment.

Structural Organisation

The RAAF has five operational elements, the units of which actively and directly participate in air operations. These elements are the strike/reconnaissance force, tactical fighter force, air transport force, tactical air support force and the maritime force. The strike/reconnaissance force provides a capability for offensive air operations against land and naval targets, and a long range reconnaissance capability. The tactical fighter force is responsible for air superiority, air defence and air interdiction operations, and also provides close air support to sea and land forces. The air transport force is used for routine strategic and domestic transport, and in addition has a tactical transport role. Tactical transport and close air support aircraft normally operate within a tactical air support force which is usually controlled by a joint (Air Force/Army) headquarters. Maritime forces are primarily employed in ocean surveillance, anti-submarine warfare and search and rescue. Major maritime operations are controlled by a joint (Air Force/Navy) headquarters.

The support component consists of those units and personnel which support units of the operational component. The elements are maintenance, supply, air training, ground training, administrative and the RAAF Reserve.

Aircraft

The RAAF's strike/reconnaissance force is equipped with F-111 and RF-111C aircraft. The air defence and ground attack squadrons are equipped with the Mirage 1110/D. Transport aircraft currently in use are Hercules C130H and C130E, Caribou, Mystere 20, HS-748, Boeing 707, and BAC-111. Three squadrons operate Iroquois and one operates the Chinook medium lift helicopters. Maritime squadrons operate Orion P-3B and P-3C aircraft. Aircraft used for aircrew initial training are the CT-4 Airtrainer, Macchi and HS-748T2.

Training

RAAF Academy. The RAAF Academy at Point Cook, Victoria is an affiliated college of the University of Melbourne. Cadets are selected principally for the General Duties Branch, and, after three years tertiary training, graduate with a Bachelor of Science degree. Graduates then complete a basic aircrew training course. Cadets selected for the Engineer Branch study the first year at the Academy and then attend the University of Sydney to graduate with a Bachelor of Aeronautical Engineering degree.

Engineer Cadet Squadron. The Engineer Cadet Scheme provides training for degree status in aeronautical, mechanical, electronic and communication engineering at the Royal Melbourne Institute of Technology. Electronic and communication engineering can also be taken at the Western Australian Institute of Technology.

Equipment Cadets. Cadets selected for Equipment Branch duties undertake a three year course at the Darling Downs Institute of Advanced Education in Queensland. They graduate with a Bachelor of Business degree.

Basic Aircrew Training. Flying training for RAAF pilots is conducted at Point Cook, Victoria and Pearce, W.A. RAAF navigators are trained at East Sale, Victoria and airman aircrew (flight engineers, loadmasters and air electronics analysts) undergo basic training at Edinburgh, S.A. Officer and military training forms part of the training course for pilots and navigators. NCO and military training forms part of the training for airman aircrew. The RAAF also provides pilot and observer training for the RAN and pilot training for the Army and Papua New Guinea Defence Force.

Aircrew Operational Conversion. Conversion training to Mirage fighter aircraft and Orion Maritime aircraft is conducted by the respective conversion training squadrons. Conversions to other operational aircraft are conducted within the operational squadrons.

Officer Training. With the exception of those officers commissioned from the RAAF Academy, all officers entering directly (with or without tertiary qualifications), commissioned airmen and airwomen, aircrew (pilot and navigator), engineering and equipment cadets and undergraduate students undergo the Junior Officer Initial Course (JOIC) at the Officers' Training School, Point Cook, Victoria. Following graduation from the JOIC all graduates, with the exception of aircrew (pilot and navigator), immediately undergo the Joint Officer Executive Course at Officers' Training School, Point Cook.

Staff College. The RAAF Staff College located at Fairbairn, A.C.T., provides two residential staff courses. The Basic Staff Course of six weeks duration provides Command and staff training to officers of the rank of Flight Lieutenant. The Advanced Staff College Course of forty-three weeks duration provides staff training and higher service education to selected officers normally of the rank of Squadron Leader. This course is designed to broaden the students' professional background and to prepare them for Command and staff appointments of greater responsibility. A one year correspondence course covering military studies, international affairs and management is a compulsory prerequisite for entry to the advanced course.

Ground Training. The major ground training schools are the School of Radio at Laverton, Victoria and the School of Technical Training at Wagga, New South Wales. Both schools provide trade and technologist apprentice and adult trade training for technical personnel. They also provide post-graduate type training and specialist familiarisation courses on aircraft and telecommunications systems. Non-technical courses conducted at Wagga include catering, clerical, supervision and management and instructional technique.

Equipment for the Royal Australian Air Force

Forecasts regarding major capital equipment acquisitions are as follows:

- Deliveries of ten additional P3C aircraft to replace existing P3B aircraft will commence in November 1984
- The first two F/A-18 aircraft for the RAAF are scheduled for delivery in the US in October 1984. The first Australian assembled aircraft is scheduled for delivery in April 1985.
- New major capital equipment decisions approved by the Government during 1982-83 included, two F/A-18 Operational Flight Trainers and two additional B707 aircraft.

Deliveries expected during 1983-84 include:

- C130H Simulator;
- P3C Operational Flight Trainer; and
- 18 Aerospatiale AS350B Light Helicopters.

Defence Science and Technology Organisation

The Department's defence science and technology establishments, collectively known as the Defence Science and Technology Organisation (DSTO), form the second largest research organisation in Australia with some 1,000 professional scientists and engineers in its total staff of about 4,400.

DSTO was established as a unified organisation in 1975 when the laboratories formerly in the Department of Supply were brought into the Department of Defence and under the direct control of the Chief Defence Scientist.

The Defence Review Committee presented its interim report to Government in May 1982 and its final report in November 1982. On 7 May 1982 several organisational units were transferred from the Department of Defence to the newly created Department of Defence Support (DDS), following a recommendation of the interim report. Under these re-arrangements, the administration of most of the DSTO establishments was transferred to DDS; the Chief Defence Scientist (CDS), his central staff and the Central Studies Establishment remained in the Department of Defence.

Following the change of Government on 5 March 1983, new Administrative Arrangement Orders were issued on 11 March 1983 which returned the DSTO Laboratories to the Department of Defence.

DSTO has a central office and one establishment in Canberra, representatives in London and Washington, and nine laboratories in five States. The Chief Defence Scientist, is supported in the Central Office by a Deputy, and policy and management staff. Scientific advisers are attached to Service headquarters in Canberra and some field headquarters.

The objective of DSTO is to help the Australian Defence Force take best advantage of modern technology. Major activities are: scientific input to Defence policy formulation; solution of Defence Force problems particularly where high technology or special features of Australian physical or military environment are involved; modification and extension of life of military equipment; development of indigenous equipment; evaluation of military equipment and procedures by trials, exercise analysis or operational research; support to defence industry; and international co-operation in defence research and Development (R & D). The DSTO also conducts mission-oriented research and enhances or maintains a technology base in key areas such as surveillance, aeronautics, weapons guidance and other electronic systems and countermeasures, explosives and propulsion.

There is considerable interaction between DSTO and its principal customers, the Defence Force and defence industry. Many companies benefit from close association with this R & D effort, some having facilities adjoining or co-located with the Defence Research Centre, Salisbury (DRCS).

Despite the laboratories' strong alignment with defence, their unique skills and facilities are available for non-defence tasks when priorities permit. Functions of the laboratories are briefly described below.

Aeronautical Research Laboratories, Fishermans Bend, Victoria—Provides research support primarily to the defence force and defence industry in fields including aerodynamics, aircraft materials, structural integrity and efficiency of aircraft, analysis and integration of systems, and on air-breathing propulsion systems and engine airframe integration and performance. It also assists civil aviation in some of these fields.

Advanced Engineering Laboratory, DRCS, S.A.—Engages in engineering feasibility studies and the development, design and manufacture of prototype systems and equipment in the mechanical and electronic engineering fields. It also provides engineering support to the Services and assistance to defence-related industry and maintains an advanced engineering technology base.

Armed Forces Food Science Establishment, Scottsdale, Tasmania—Determines the energy and nutrient requirements of servicemen under all conditions in which they may be expected to operate and translates these needs into ration scales for static mess feeding and ration packs for combat purposes.

Central Studies Establishment, Canberra, A.C.T.—Carries out analytical studies on force structure, defence planning, equipment proposals, weapons systems, logistics and manpower.

Electronics Research Laboratory, DRCS, S.A.—Is concerned primarily with R & D in radar, radio, electronics, infra-red physics, optics, electro-optics, electronic warfare and surveillance.

Joint Tropical Trials and Research Establishment, Innisfail. Qld—Performs investigations and research on the effects of tropical environments on materials, equipment and electromagnetic wave propagation; and on mechanisms of degradation, ways of measuring degradation and the classification of tropical environments. Sponsored jointly by Australia and UK.

Materials Research Laboratories, Maribyrnong, Vic.—Provides research and development support to the Defence Force and defence industry in fields including organic and inorganic materials, metallurgy, explosives and ordnance, electromagnetic propulsion and terminal ballistics, high energy lasers and camouflage.

Materials Testing Laboratory, Alexandria, N.S.W.—Provides a consultant and investigatory service in areas of non-destructive inspection, physical metallurgy, corrosion and mechanical testing. There are facilities for the examination and analysis of textiles, petroleum products, paints, non-organic finishes and explosives.

RAN Research Laboratory, Edgecliff, N.S.W.—Conducts operations research studies of maritime warfare, analyses maritime exercises, and undertakes research on underwater acoustics, oceanography, sonar and mine warfare.

Weapons Systems Research Laboratory, DRCS, S.A.—Responsible for R & D related to aeroballistic aspects of weapons and weapon systems, rocket and gun propulsion systems, combat data and display systems, guidance and control systems for weapons, underwater detection systems and the integration of systems.

Defence Research Centre, Salisbury, S.A.—Comprises the Advanced Engineering, Electronics Research and Weapons Systems Research Laboratories and provides for their administrative support. DRCS Administration provides general support services for the Defence Support Centre, Woomera.

Defence Support Centre, Woomera, S.A.—Provides an outdoor laboratory essential for weapon systems trials in support of R & D programs.

The DSTO Central Office in Canberra has two Divisions:

Programs and Administration Division controls the management and administration of DSTO forward planning and advises on the optimum deployment of DSTO resources, co-ordinates co-operation with overseas governments and is responsible for information services (Defence libraries) as well as career planning and assessments. It also manages special joint undertakings with other countries.

Projects and Analytical Studies Division provides management and advice on major development projects and co-ordinates relevant establishment activities, co-ordinates analytical studies throughout DSTO, fosters DSTO contacts with other national science and technology agencies and bodies, with professionals in industry, academic institutions, other R & D agencies and with the wider community.

Natural Disasters Organisation

In 1972 the former Directorate of Civil Defence was moved from the Department of Interior to the Department of Defence and was absorbed into the Natural Disasters Organisation (NDO) which was established in 1974.

NDO's primary peacetime function is to mitigate the effects of disasters. It does this, at the request of State and Territory counter disaster organisations, by co-ordination of physical assistance from the Defence Force and other Commonwealth Government Departments. Non-Government organisations also co-operate with NDO. States and Territories have complete responsibility for their own Counter Disaster Organisations. The NDO and State and Territory Emergency Services together constitute a core civil defence structure.

At the national level NDO develops and implements contingency plans to cope with requests by State/Territory counter disaster authorities for Commonwealth resources during disasters or for civil defence needs. A National Emergency Operations Centre located at NDO Headquarters in Canberra provides a focal point for the co-ordination of national efforts when required and maintains communication with State and Territory authorities and Commonwealth Departments during disasters or potential disasters such as impact on Australian territory of space debris.

A number of Commonwealth funded support programs for State/Territory Emergency Services are administered by NDO. These include—the supply of emergency type equipment such as radios, rescue vehicles, generators, flood rescue boats, etc.—reimbursement of salaries of State/Territory full time organisers at regional level—subsidies on a limited $ for $ basis to provide accommodation for State/Territory Emergency Service Units at local government level—the provision of public information material and training handbooks.

Other programs which benefit all organisations having a counter disaster involvement and the community generally are—training at the Australian Counter Disaster College, Mt Macedon Victoria, or by College mobile teams in States/Territories—fallout shelter surveying—maintenance of emergency broadcasting facilities.

DEPARTMENT OF DEFENCE SUPPORT

The Department of Defence Support was formally established (by the Governor-General in Council) on 7 May 1982, and draws together elements previously located in the Departments of Administrative Services, Defence, and Industry and Commerce as recommended by the Interim Report of the Defence Review Committee (the Utz Committee).

The Department of Defence Support has, within the overall defence, industry and employment policies, the goal of provision of optimum support for the nation's defence effort in peace and war and the development of an appropriate technological and industrial infrastructure. The Department is responsive to the requirements of the Australian Defence Force and the need to revitalise and further develop the infrastructure which supports that Force.

The Department in close co-operation with the Department of Defence:

- provides technical expertise and other forms of assistance to encourage and facilitate the development of modern and viable defence-related industries in Australia;
- ensures that Australian industry participates in the production of defence equipment to the maximum extent practicable;
- administers the Australian Offsets Program so as to stimulate technological advancement and broaden the capabilities of Australian industries of significance to this country's strategic and overall manufacturing needs;
- undertakes the purchase of goods and services for defence purposes;
- provides advice on the capacity, efficiency and capability of the Australian defence industry;
- manages the Government's defence facilities including munitions and aircraft factories, and dockyards; and
- consistent with the Government's defence and foreign affairs policies, markets defence and allied products and services to help maintain industrial capabilities of strategic significance.

The Department, at 30 June 1983, employed 15,444 people under the Public Service Act, the Supply and Development Act and the Naval Defence Act. This workforce includes some 2,100 professional and technical staff, 4,200 tradesman and 1,500 apprentices.

Budget allocations

Estimated total expenditure for the Department in the 1983–84 Budget was $377.2 million, an increase of $47.4m (14.4%) on the 1982–83 figure of $329.8m.

The Department is heavily committed to work associated with important defence projects ranging from the Basic Trainer Aircraft and the F/A-18 fighter programs to the Waler armoured vehicle, the Raven combat radio, the Discon telecommunications system, the Barra submarine detector and the follow-on destroyer projects.

Some of these projects already involve considerable work by Australian industry and contribute further to the nation's expanding technological capability.

DEPARTMENT OF DEFENCE SUPPORT 1983–84 OUTLAYS BY FUNCTION

	$m	$m
Defence aerospace		**110**
F/A-18 Fighter Aircraft program	52	
Basic Trainer Aircraft	5	
Nomad Aircraft	14	
RAAF/RAN Aircraft Overhauls and Spare Manufacture	23	
Lightweight Box-launched IKARA	1	
Other	15	
Defence shipbuilding		**128**
Cockatoo Island Dock improvement	3	
Garden Island Dockyard modernisation	26	
Repair and refit of naval ships	50	
Naval ship construction	31	
Maintenance of Navy shore installations	5	
Manufacture and repair of Navy stores	13	

DEPARTMENT OF DEFENCE SUPPORT 1983–84 OUTLAYS BY FUNCTION

	$m	$m
Munitions	..	103
High explosives, propellant and rocket motor manufacture	19	
Ordnance and specialised engineering	28	
Manufacture and repair of small arms, ammunition and fusing devices	37	
Filling and assembly of military explosives and pyrotechnic stores	16	
Reserve stocks	3	
Administration		36
Defence purchasing	8	
Marketing	1	
Industry assistance and offsets	5	
Central and regional administration and miscellaneous	22	
Total Defence Support 1983–84 outlay		377

Of the additional $47.4m in the Budget outlays some $26m of the increase were set aside for machinery, plant and works for the manufacture, final assembly and test of the F/A-18 aircraft, while $16.3m of the increase will go towards upgrading the Garden Island Dockyard.

Transfers of responsibilities from other Departments, such as the defence purchasing function from the Department of Administrative Services, account for $13.9m, although these have been partly offset by savings in other areas (−$8.8m). The Department is also responsible for the administration of the Australian Industry Assistance Program which is funded through the Department of Defence ($29m).

Munitions Production

The Department of Defence Support maintains and operates nine factories for the manufacture of munitions and other defence material, including military clothing. The munitions factories undertake work in the fields of light, heavy and chemical engineering.

As well as achieving progress in the development and production of munitions for Australia the factories have helped to broaden the country's industrial base. They develop and adopt new manufacturing technology and a diverse range of production equipment is used to develop new production processes and apply new techniques.

Through the Department, the munitions factories have links with munitions manufacturers in the UK, Europe, and North America. The Department also maintains contact with ASEAN countries on defence production matters and provides some training for their engineers. Functions of the facilities are briefly described below.

Small Arms Factory, Lithgow, N.S.W.—manufactures small arms, weapons and kindred defence equipment.

Mulwala Explosives Factory, N.S.W.—manufactures acids, nitrocellulose and granular propellants.

Munitions Filling Factory, St Marys, N.S.W.—assembles and fills artillery ammunition, bombs, depth charges, warheads, rockets, mines and pyrotechnic items.

Albion Explosives Factory, Vic.—manufactures high explosives and some gun propellants, and recovery of concentrated acids.

Australian Government Clothing Factory, Coburg, Vic.—manufactures uniforms and other clothing for the defence services and other government departments.

Explosives Factory, Maribyrnong, Vic.—produces rocket motors, gun propellants, explosive devices, special paint products and undertakes chemical process design and installation.

Ordnance Factory, Maribyrnong, Vic.—manufactures ordnance, projectiles, heavy forgings, bomb and rocket motor components, electrical generators, fabrications and test equipment.

Ordnance Factory, Bendigo, Vic.—manufactures ordnance and gun mounting systems, heavy engineering products for both defence and the private sector, ships shafting and propulsion systems.

Ammunition Factory, Footscray, Vic.—specialises in the production of small arms ammunition, cartridge cases, small calibre projectiles and fusing mechanisms for gun ammunition.

Defence Aerospace

In aerospace matters the Department's objectives, within Government policies, are to:

- develop and maintain an industrial capability in the fields of aircraft, guided weapons and electronics-communications;
- co-ordinate and direct the operation of Government aerospace facilities and programs; and
- implement related policies.

In the case of the aircraft, guided weapons and electronics-communications industries, the Department has responsibilities of a wide nature, involving provision of advice and oversight of the development of capacity and capability in the private sector as well as the government establishments involved. Major aerospace activities include:

- analysis of defence requirements for manufactured aerospace goods and associated services and the assessment of the capability of the Australian aerospace industry to meet these requirements;
- development of the industrial capability and capacity to meet current and future government requirements for manufactured aerospace goods; and
- development and introduction of improved production practices and techniques in government-owned aerospace establishments and their promotion in the Australian manufacturing industry.

Government aerospace facilities are:

Government Aircraft Factories (GAF), Fishermen's Bend and Avalon, Victoria—GAF is involved in the design, development, manufacture, assembly, modification and test of military and civil aircraft and guided weapons. Current activities include Nomad aircraft, Ikara anti-submarine weapon system, Jindivik target aircraft, Mirage support and manufacture of airframe components for export against offset orders. New activities include F/A-18 Fighter Aircraft and Basic Pilot Training Aircraft.

Aircraft Engineering Workshop (AEW), Pooraka, South Australia—AEW provides a quick response engineering jobbing workshop capacity for the Services and has capability in the areas of fine machining, electroplating, heat-treatment, welding and sheet-metal fabrication to aircraft manufacturing specifications.

Guided Weapons and Electronics Support Facility (GWESF), St Marys, N.S.W.—GWESF provides technical support to the Services in testing and calibration of a wide range of electronic items and also provides independent facilities and technical expertise to assist Defence industry.

Defence Shipbuilding

The Department of Defence Support manages the Dockyards at Garden Island and Williamstown, and is responsible for the Cockatoo Island Dockyard which is operated on behalf of the Commonwealth by Vickers Australia Pty Ltd.

These dockyards undertake: refitting; repair; modernisation; and construction of naval vessels.

Garden Island is principally concerned with refitting, repair and modification and is undergoing major modernisation to improve its ability in these areas and to create a fleetbase which is able to cope with the demands of modern naval vessels and systems.

Williamstown Dockyard, planned as the principal construction yard for destroyer size ships, is also being modernised for the building of FFG type frigates for the Royal Australian Navy.

All updates and modifications of submarines are carried out at Cockatoo Island Dockyard and the new underway replenishment ship, HMAS *Success* is under construction.

Defence Purchasing

The Department of Defence Support is the Purchasing Authority for all defence supplies of goods and services (except those common use items falling within the responsibility of the Department of Administrative Services), purchased in or from Australia from commercial suppliers above the prescribed public tender threshold (currently $10,000).

The Department undertakes defence purchasing through:

- Major Contracts Branch (located in Central Office) for major defence equipment procurements (usually those over $5 million, but also other requirements of smaller value but with great complexity of other special features), and
- Defence Purchasing Regional Offices located in each capital city for all other defence purchasing.

Activities undertaken include many significant contractual arrangements conducted recently for the Department of Defence, among them: the production of Barra sonobuoys, Raven Phase 3A (radio system); Waler Phase 1 (light armoured vehicle); prototype Minehunter catamarans; Basic Pilot Trainer Aircraft; and provision of production infrastructure items and overseas training of industry personnel in support of the F/A-18 Tactical Fighter Project.

Australian Offsets Program

The Department has overall responsibility for the administration and future development of the Australian Offsets Program.

Where Australian industry is not able to meet the Government's requirements and overseas purchases are necessary, overseas suppliers are required to provide local industry with viable offsets opportunities.

The objectives of the Program are to secure workload which will broaden the capabilities of industry which is of technological or defence significance to Australia, to stimulate technological advancement and to provide new employment opportunities within Australian industry.

To date the Program has been instrumental in obtaining over $600 million worth of high technology workload for industry. Opportunities currently exist for more than $1,000 worth of offsets work.

CHAPTER 5

INTERNATIONAL RELATIONS

The basic principles underlying the shaping and conduct of Australia's foreign policy are that Australia is a significant middle-level power with democratic institutions; having strong affiliations with other Western countries but an emerging Asia-Pacific identity through its increasing involvement in the region.

Australia's prosperity is largely dependent on trade; it is geographically remote from its founding nation, principal migration source countries, major markets and its main allies; it is a relatively affluent and resource rich country in a populous, developing and rapidly changing region.

Initially, Britain and the Commonwealth countries were the central elements of Australia's foreign policy and activity. Later, partly as a consequence of the vital role played by the United States of America in the Pacific during the Second World War and subsequently, close relations were also developed with that country. These links, and links with Western Europe, remain important factors in Australian policy. Australia inherits its national traditions from Western European countries, conducts a major part of its trade with these countries and with Japan and the United States, and obtains technology and capital for its development from them.

Australia is located in a region which includes the politically, economically and strategically significant countries of North East and South East Asia and the many newly independent nations of the South Pacific. Awareness of the importance of these neighbouring states has led successive Australian Governments to seek to promote and maintain friendly and co-operative relations with them, not only to ensure the stability and security of the region, but also to develop mutually profitable trade, investment, exchange of technology, and co-operation in the development process. Australia gives special attention to its relations with China, Japan, ASEAN (the Association of South East Asian Nations) and its members, New Zealand, Papua New Guinea and the other South Pacific states.

Australia has also been concerned at the increasing instability in the world strategic environment, particularly in South West Asia, Indo-China, the Middle East and Africa. Australian foreign policy is committed to an independent constructive approach to those central issues within the framework of the Western alliance.

New international issues (economic, disarmament, resources, human rights, refugees, North—South relations, etc.) and new concepts of national interest have arisen together with an increasing recognition of the growing interdependence of the world community. This is reflected in economic issues becoming one of the priorities in Australia's foreign policy. Australia recognises the importance and growing complexity of economic issues, particularly the slow-down in world trade and economic development and the major problems of world debt affecting both developed and developing countries. The slowing interdependence of national economic and foreign policies and the increasing vulnerability of Australia's economy to international trade and other developments will remain at the heart of Australia's foreign policy concerns for some while to come. Australia places a high priority on its participation in the resolution of these global issues in the United Nations, the Commonwealth and other multilateral forums.

The United Nations

Successive Australian Governments have reaffirmed their support for the United Nations (UN), its Charter and the work being done in the various specialised agencies. Within the United Nations and other organisations, Australia seeks to work toward the solution of the pressing problems confronting humanity today.

Australia is involved in a wide range of United Nations matters and has served on many United Nations bodies. It was a member of the Security Council in 1973–74 and, in 1975, a long period of membership on the Trusteeship Council came to an end with the independence of Papua New Guinea. It is a member of the Special Committee on Decolonisation and the UN Council for Namibia.

Australia also supports the work of the specialised agencies and subsidiary bodies in such areas as development assistance, drug control and human rights. It is an active participant in the economic work of the United Nations through such forums as the UN Conference on Trade and Development (UNCTAD) and has been re-elected to the UN Development Program (UNDP) Governing Council for three years from 1 January 1983. Australia is a member of the UN Commission on Narcotic Drugs, and on the Executive Board of the UN Children's Fund and the Governing Council of the UN Environment Program (UNEP)—and has been elected to the Statistical Commission for a four-year term which began in 1981. Australia is a member of three of the UN Educational, Scientific and Cultural Organisation's Governing Councils and its prominent role in world refugee assistance is reflected in membership of the Executive Committee of the UN High Commissioner for Refugees.

Australia has been involved in almost all UN peacekeeping activities since these began. Australia has also contributed its assessed share of the costs of all UN operations and also makes voluntary contributions as well as providing men and equipment for peacekeeping forces.

Australia is also fully involved in the work of the UN on disarmament and outer space, and is a member of the main subsidiary bodies working in these areas.

Australia accepts the compulsory jurisdiction of the International Court of Justice and plays an active role in bodies concerned with the development of international law.

The Commonwealth

The Commonwealth is a distinctive and unique framework bringing together about a quarter of the world's population. Australia participates actively in the broad range of Commonwealth activities. It was host to the first regional Heads of Government meeting in Sydney in February 1978, and hosted the Commonwealth Heads of Government Meeting (CHOGM) in Melbourne in September-October 1981.

South East Asia

Australia shares with South East Asian countries a concern for peace and the economic and social development of the region. The Australian Government is in regular contact and consultation with South East Asian governments on a wide range of issues. Contacts with them have widened beyond the scope of official activity to include consultation between private sector organisations, co-operation in trade and resources, the export of Australian expertise and technology in joint enterprise arrangements, and direct Australian investment. Benefits from this growing economic relationship are mutual, and it is essential to Australia's economic and political future in its own region.

The range of personal contacts with the region continues to widen, as tourism develops, migration from Asia to Australia grows, student exchanges increase, and academic studies and press coverage of regional affairs expand.

Australia has particularly welcomed the progress made by ASEAN and its contribution to the promotion of regional co-operation. Australia has a significant interest in helping to ensure that ASEAN succeeds in generating economic growth and political stability and supports its wish to prevent domination of the region by any major power. Australia has entered a program of economic co-operation with ASEAN. It has proposed a contribution of $13.1 million for 1983–84 (expenditure in 1982–83 was $12.0 million), and for a number of years has played a major part in assistance with the Indo-Chinese refugee problem.

Asia

Australia believes that peace and prosperity in Asia depend largely on the ability of countries in the region to co-operate to secure these objectives and in ensuring that no major power, either inside or outside the region, is able to exert an undue influence in the area.

Australia's primary interest and concern in Asia has long been reflected in its active role in regional associations and organisations such as the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Colombo Plan, the Asian Development Bank and in many other bodies, both private and government.

Japan is Australia's largest trading partner, with total trade now around $10,000 million a year and is a significant source of investment funds. Relations between the two countries in political, cultural, scientific, sporting and other areas are being actively fostered by both Governments with a view to improving mutual understanding and friendship.

Australia attaches a high priority to its relations with China. The bilateral relationship has expanded rapidly in the last few years, and now covers a broad range of contacts in many areas. Trade is substantial, and there are exchanges in the fields of culture, science, agriculture, education and the media. There is a development assistance program under the Technical Cooperation agreement. The Australian China Council actively sponsors the expansion of bilateral contacts. Australia and China engage in frequent political consultations, a process which has been facilitated by an exchange of high level visits. In April 1983 Australia hosted a visit by China's Premier, Mr Zhao Ziyang, the first Chinese Head of Government to visit Australia. The Minister for Foreign Affairs, Mr Bill Hayden, visited China in August 1983.

Australia's relations with the Republic of Korea are firmly established. In addition to the important economic partnership, both countries are promoting exchanges in other areas.

Australia is developing its relations with Laos and is providing a small program of development assistance. Australia maintains normal diplomatic relations with Vietnam but the bilateral relationship has been affected by Vietnam's military occupation of Kampuchea.

Australia recognises the strategic and political importance of the Indian sub-continent and has continued to strengthen friendly relations with the countries of that region. There have been regular exchanges of Prime Ministerial and ministerial visits between Australia and the region. As part of the aid program with India, Australia is providing assistance, with an emphasis on livestock development.

South Pacific

Australia looks to consolidate and to expand its co-operative activities to promote the stability, welfare, harmony and economic development of the region. Australia has moved deliberately to develop and extend its bilateral relations with the Island countries and now has nine diplomatic missions in the area. Aid programs are substantial in size and varied in nature, covering all types of infrastructure and other development projects. The Australian Government has approved a new five-year forward indicative planning figure for the aid program to the region (excluding Papua New Guinea) to commence 1983–84. A further $5.202 million for defence co-operation projects in the countries of the South West Pacific has been allocated for 1982–83.

As the largest of the South Pacific Island States, Papua New Guinea (PNG) has played, since independence, an influential and leading role in the region. Australia and PNG have a close and warm relationship which encompasses a broad range of Government and non-government activities. Australia's aid commitment to PNG is substantial and a second five-year aid agreement was announced in September 1980, Australia's budgetary aid will total $288 million for 1983–84 while the defence co-operation program will provide grant assistance of a further $17.54 million.

In 1983, Australia hosted the 14th South Pacific Forum. Australia was a foundation member of the South Pacific Commission, the South Pacific Forum and the South Pacific Bureau for Economic Co-operation and has become a party to the convention establishing the Forum Fisheries Agency. Australia takes part in these and the many regional meetings held in the Pacific to act on a broad range of issues of common interest. Besides contributions to ESCAP, SPEC and the SPC, financial support for other regional and international programs developed in the South Pacific is being maintained in 1983–84. Australia has also established a fund to promote the preservation and development of Pacific cultures. Australia and New Zealand have entered into a non-reciprocal preferential trade agreement in favour of South Pacific Forum States: the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA).

Relations between Australia and New Zealand are particularly close. They are based on shared history, close economic ties, and common problems in dealing with the current international political and economic environment. The implementation in 1966 of the New Zealand-Australia Free Trade Agreement (NAFTA) established a special trading relationship between the two countries. Negotiations on an agreement to replace NAFTA began in 1980. These led to the signing in March 1983 of the Australia-New Zealand Closer Economic Relations Agreement (CER) designed to assist both countries to further expand their mutual economic and trading links.

The Australia New Zealand Foundation was founded following discussions between the Prime Minister of Australia, the Rt Hon. Malcolm Fraser, and the Deputy Prime Minister of New Zealand, the Hon. Brian Talboys, in March 1978. The aim of the Foundation is to help strengthen relations between Australia and New Zealand by encouraging the study and discussion of issues of interest to both countries and the promotion of increased cultural and other exchanges. The Foundation is government-funded but is administered by an independent Executive Board.

The Americas

Australia has a long-standing and close relationship with the United States which extends across the whole range of the national life of both countries. Government-to-Government relations are only one part of a larger and more extensive interaction between the two countries which derives from common experiences, culture and language. In general, relations between the countries are warm and co-operative, with a high degree of official political consultation and a close personal relationship between the political leaders. The affinity between Australia and the United States is underpinned by substantial economic and commercial relations which, however, are not without their substantial difficulties from time to time. The United States has been in recent years Australia's largest supplier of imported items and is our third largest export market.

Canada is, to a greater degree than other nations, a country comparable with Australia in terms of institutions and traditions, geographical size, economic standing and international outlook. The genuine goodwill established between the two countries has allowed Canada and Australia to co-operate on the achievement of mutually desirable objectives, reflecting individual national interests and competition in certain commercial fields.

Developments in the Caribbean and the Latin American region are of increasing importance to Australia, and resident missions have been established in Jamaica, Mexico, Chile, Argentina, Brazil, Peru and, most recently, Venezuela. Australia has observer status at the annual General Assemblies of the Organisation of American States.

Europe

Australia attaches considerable importance to maintaining warm and friendly relations with the countries of Western Europe, with the European Community and its institutions, including the European Parliament.

Bilateral relations with individual Western European countries continue to be of considerable importance. These relations are promoted by the very close cultural and historical links we share with these countries and are reinforced by the presence in Australia of large numbers of people of recent European origin. Economic ties between Australia and the major Western European economies are likely to be significantly strengthened by a major increase in the export of Australian energy resources to Europe.

The European Community (EC) is Australia's second largest trading partner and a major source of investment funds and scientific and technological expertise. The 1979 agreement with the EC over the Multilateral Trade Negotiations (MTN) has gone only some way towards resolving trading difficulties. Australia remains committed to seeking the development of a closer and mutually advantageous relationship with the EC based on our wide range of common interests.

With the establishment in 1979 of the first directly elected European Parliament, it is evident that the Parliament will assume an increasingly important role in the Community. A delegation from the Parliament visited Australia early in 1981 during which the foundation for further mutually advantageous contact was established. The opening of an EC Commission Delegation in Australia in 1981 and the visit of the Commission President in 1982 were important developments.

Australia is a member of the Internal Energy Agency of the OECD which has developed into the major forum for continuing consultation and co-operation on energy matters between most of the major industrialized nations which are Australia's principal trading partners.

Australia's relations with the Soviet Union have been circumscribed following that country's invasion of Afghanistan. The Government has denounced unequivocally the Soviet invasion as being totally without justification and as being in contempt of the Charter of the United Nations. Australia does not accept the Soviet view that what has occurred in Afghanistan can be divorced from the conduct of bilateral relations. To demonstrate its concern, the Government has taken a number of measures to curtail relations between Australia and the Soviet Union.

Australia has expanded its contacts with Eastern European countries since 1966, which saw the establishment of diplomatic missions in Poland and the German Democratic Republic (GDR). Eastern Europe is a sensitive area in world affairs and Australia has an interest in the maintenance of a balanced East/West relationship. Eastern Europe also has significant potential for Australian exports, particularly commodity exports, although there have been significant debt problems emerging in some Eastern European countries in recent years. Another aspect of our relations with Eastern Europe is the presence in Australia of large ethnic groups from countries of the region which have substantial links with their country of origin, notably in cultural matters.

The Middle East

Much value is placed on Australia's longstanding and close relations with the Arab nations and with Israel. Australia has an interest in the settlement of unresolved disputes in the region and supports moves to bring about negotiation of differences. Although Australia's ability to bring influence to bear towards a settlement of the Middle East dispute is limited, it has important interests in the region which cannot be overlooked. Australia supports the Camp David Accords and the peace treaty between Israel and Egypt, seeing them as a first step towards a just, lasting and comprehensive peace settlement. Australia's position on the Middle East dispute is that a comprehensive settlement should be based on United Nations Security Council Resolution 242 (which, inter alia, recognises the right of all states in the area to live in peace within secure and recognised boundaries and calls on Israel to withdraw from territories captured in 1967) and recognition of the legitimate rights of the Palestinians including their right to a homeland and the right to participate directly in decisions affecting their future. The terms of a settlement are a matter for negotiation among the parties directly concerned.

Africa

Australia wishes to broaden the range of its contacts with independent black African states and consolidate links with those with which it already enjoys friendly relations. It maintains a policy of no racial discrimination, strong opposition to apartheid including support for the Commonwealth statement on Sport (The Gleneagles Declaration). Australia maintains correct but cool diplomatic relations with South Africa. Australia supports international action to bring Namibia to independence by a negotiated settlement. There has been a significant growth of aid to Africa in recent years. While aid is given to some 20 recipients in Africa, the greater proportion goes to the Commonwealth member states in East Africa.

Indian Ocean

Although recognising that the deterioration in the regional and international climate following the Soviet invasion of Afghanistan has ruled out any immediate prospects for the successful convening of a conference on the Indian Ocean as a zone of peace, Australia continues to play an active role in the UN Ad Hoc Committee considering this matter. In response to the changed strategic situation in the north-west Indian Ocean region, Australia has increased its naval and air deployments into the region on an independent national basis. It has also indicated a readiness to co-operate with the United States in assisting the latter's deployments into the region. In March 1981 Australia and the United States agreed on terms for staging unarmed B-52 aircraft through Darwin for the purposes of training and surveillance over the Indian Ocean.

ANZUS

Maintenance of the ANZUS alliance with the United States and New Zealand remains of major importance in Australian foreign policy. The alliance continues to play a valuable role in the promotion of stability and normal relations in the Asian and Pacific area.

Nuclear issues

Australia's strong commitment to effective disarmament and arms control is reflected in Australian support for the international non-proliferation regime. Australia ratified the Nuclear Non-Proliferation Treaty (NPT) in 1973 and encourages universal adherence to it. Australia strongly supports the NPT and is active in preparations designed to ensure the success of the third review conference of the NPT to be held in 1985. Australia is also a member of the International Atomic Energy Agency (IAEA) and as a member of the IAEA Board of Governors has important responsibilities for the effectiveness of IAEA activities and actively supports endeavours to strengthen the IAEA's international safeguards system. Australia plays an active role in IAEA Committees and in other international bodies dealing with the clarification of multilaterally agreed guidelines on export controls for non-proliferation purposes.

The nuclear safeguards arrangements governing the export and subsequent use of Australian uranium are being reviewed. Pending the outcome of that review, exports of Australian uranium under existing contracts are being permitted—except in the case of France—in accordance with the conditions set out in binding bilateral nuclear safeguards agreements with customer countries. These conditions include an undertaking not to use Australian origin nuclear material for any military or explosive purpose, and the acceptance of IAEA safeguards in order to verify that undertaking. Shipments of uranium for use in France have been suspended pending the outcome of discussions over French nuclear testing in the South Pacific: no breach of contract is involved in the suspension.

Australia is also a member of the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD). Australian values the NEA as an essentially technical forum for international consultation on nuclear issues.

Disarmament and arms control

Australia is concerned to promote nuclear arms control and disarmament objectives in the United Nations and, in January 1979, became a member of the Committee on Disarmament in Geneva. In July 1983 the Government announced the appointment of Australia's first Ambassador for Disarmament whose principal role will be to represent Australia on the Committee on Disarmament and at other disarmament forums. Australia attaches particular priority to the earliest possible conclusion of a treaty banning all nuclear testing in all environments and is working to uphold and strengthen the Nuclear Non-Proliferation Treaty. Although not a party to the negotiations on limitations and reductions on nuclear weapons that are taking place between the United States and the USSR, Australia encourages genuine dialogue and a readiness to find accommodation with the aim of stable, mutual deterrence.

Australia also accords priority to a number of non-nuclear disarmament questions. It is committed to supporting the conclusion of a fully effective and verifiable chemical warfare convention that would outlaw the use of chemicals as weapons. The 1972 Biological Weapons Convention is being examined with a view to seeing how it could be tightened up. Australia is pressing for negotiations for an agreement to prevent an arms race in outer space.

Australia has acceded to the following disarmament and arms control agreements: the Partial Test Ban Treaty, the Geneva Protocol (on Asphyxiating, Poisonous or Other Gases), the Outer Space Treaty, the Sea-Bed Arms Control Treaty, the Nuclear Non-Proliferation Treaty, the Biological Weapons Convention, the Environmental Modification Ban, the Antarctic Treaty, and the Inhumane Weapons Convention.

Economic relations

In recent years economic factors have assumed increasing importance in international relations. This is largely due to the growing economic interdependence between nations and the need for global co-operation to solve the problems facing domestic economies, particularly at a time of world recession.

Australia's interest in international economic developments derives from the overall importance of trade to Australia and its historical reliance upon a substantial amount of capital inflow to offset balance of payments deficits on the current account.

The economic instability of the world economy in the 1970s and 1980s has led to the growth worldwide of protectionist pressures and moves towards seeking solutions to economic problems through bilateralism and the formation of trade blocs. The Australian Government has endeavoured to counter these harmful trends and to encourage freer trade through its involvement in forums such as the General Agreement on Tariffs and Trade (GATT). GATT is the principle multilateral institution for negotiation of reductions in trade barriers in pursuit of the further liberalisation of world trade. In the context of the GATT Ministerial Meeting in November 1982, Australia has proposed a number of initiatives aimed at a standstill, followed by a progressive reduction, in all forms of protectionism and a strengthening of GATT's capacity to deal with outstanding trade disputes.

Australia also has a strong commitment to the freedom of international capital flows. As a net capital importer, it is of considerable importance to Australia that the international system be increasingly open and adaptable to facilitate the global exchange of goods, services, labour and capital. This is all the more so in view of the significant challenges imposed on the international monetary system by the dramatic changes in the world economy during the past decade.

Because of its particular characteristics and location, Australia is vitally dependent on its aviation, shipping and communications links with the rest of the world. Civil aviation has assumed particular prominence in Australia's foreign policy considerations in recent years, notably in its relations with developing countries in the region. These relations have been further developed by a series of new routes and services between Australia and points in South East Asia recently agreed upon by the Australian Government and the governments of the countries concerned. The maintenance of Australia's air links with Europe and the United States, furthermore, involves dealings not only with the countries to which Australia's international airline, Qantas, operates these services but also with the countries which Qantas overflies on these routes or where it enjoys stop-over rights.

A recent factor contributing to moves for changes in the world economy has been developing country demands for a New International Economic Order (NIEO) more geared to their needs and development aspirations. In 1980 and 1981 a major preoccupation of the UN General Assembly was the proposal to hold global negotiations on international development issues. They were again debated in 1982. Agreement has not been reached, however, on the agenda and procedures for the negotiations. In 1983 the non-aligned Summit at New Delhi devoted a significant part of its financial communique to a call for the implementation of a set of 'Immediate Measures' as short term emergency help for developing countries, while continuing to work for Global Negotiations in the longer term. These 'Immediate Measures' were taken up, largely unsuccessfully, at UNCTAD VI in Belgrade in June.

Australia also continues to attach great importance to its traditional relations with other developed countries, which continue to be Australia's principal trading partners. Membership of the OECD enables Australia to take part in consultations on a wide range of policy issues and on issues of international concern with countries experiencing similar social and economic circumstances. The Organisation's role in developing its members' policies on relations with developing countries, including the North/South dialogue, also makes it an important element in Australia's foreign policy. Australia is a member of the International Energy Agency of the OECD, which has developed into the major forum for continuing consultation and co-operation on energy matters between most of the major industrialised nations which are Australia's principal trading partners.

Despite the importance of Australia's relations with its traditional trading partners, considerable concern has been expressed in recent years at the growing imbalance of trading opportunities which has unduly restricted the access of important Australian agricultural products to European Community markets. Australia has also been concerned about the effect of EC export subsidies on the returns from Australia's commodity exports to third world countries. Policies are being pursued to help resolve these problems.

North/South relations

Australia seeks to play a constructive role in the dialogue on international economic development issues between the developed ('the North') and developing countries ('the South'). Australia's approach to North/South issues is based on the belief that not only are there compelling humanitarian reasons for finding solutions to the many problems facing the world economy and the developing countries in particular, but also that the degree of interdependence in the world economy makes progress imperative for international stability and economic growth. Australia's approach is also influenced by the predominance of developing countries in the region and by the fact that Australia shares a number of economic interests with the developing countries, e.g. it is a leading producer and exporter of a wide range of primary products and an importer of capital and technology.

Australia has taken a forward position on a number of North/South issues. It has encouraged changes to the international economic system sensitive to the views of developing countries, but which also would serve to promote orderly development, political stability and the full participation by all countries in an open international trade and payments system.

Law of the Sea

Australia participated in all sessions of the Law of the Sea Conference, the largest and potentially the most important conference in the history of the United Nations, involving major strategic, economic, transport, scientific and environmental issues. A Convention was adopted on 30 April 1982 and opened for signature in December 1982. The text includes articles on the system of exploration and exploitation of the deep seabed beyond the limits of national jurisdiction; extension of the territorial sea to 12 nautical miles; establishment of coastal state sovereign rights in the living and non-living resources of an 'exclusive economic zone' of 200 nautical miles; recognition of coastal state sovereign rights over the exploration and exploitation of the natural resources of the continental shelf, defined in terms of the natural prolongation of the land-mass; protection and preservation of the marine environment; marine scientific research; and the settlement of disputes. Rights of freedom of navigation and passage through straits and archipelagos which are important to trading nations such as Australia are also recognized in the text. A preparatory commission to prepare for the establishment of the International Seabed Authority and its various organs held its first meeting in Kingston, Jamaica, 15 March to 12 April 1983. It reconvened for a resumed session 15 August to 9 September 1983.

Antarctica

Australia has had a long association with Antarctica commencing with early expeditions and continuing with an active scientific program. Antarctica's importance to Australia derives from its geographical proximity, the history of Australian involvement there and Australian administration of the Australian Antarctic Territory. Australia maintains three permanent bases in the Territory at Casey, Davis and Mawson (as well as one on Macquarie Island).

As one of the twelve original signatories, Australia attaches particular significance to the 1959 Antarctic Treaty, which serves important Australian scientific, environmental and security interests. Australia hosted the first Antarctic Treaty Consultative Meeting in Canberra in 1961. Such meetings are held about every two years in one of the Consultative Party States, and in 1983 Australia was host to the twelfth meeting. India and Brazil are expected to be admitted as Consultative Parties at the twelfth meeting.

In 1980, at a conference in Canberra, a Convention for the Conservation of Antarctic Marine Living Resources was concluded. The first meetings of the Commission and the Scientific Committee established by the Convention were held in Hobart in May-June 1982. The second meetings were held in Hobart 28 August to 9 September 1983. The headquarters of the Commission began operating in Hobart in August 1982. An interim headquarters agreement for the Commission, the first international organisation to be established in Australia, was signed in Canberra on 15 August. Australia has also participated in a series of Special Consultative Meetings to negotiate a regime to regulate the exploration and exploitation of Antarctic animals. Three sessions have been held so far, and two sessions are scheduled for the first half of 1984.

Treaties

The texts of bilateral and multilateral treaties to which Australia becomes a party are printed in the Australian Treaty Series when they enter into force. The most recent consolidation of the Australian Treaty List was published as Treaty Series 1971, No. 1. Australia's current position with regard to individual treaties may be ascertained by referring to the 1971 list in conjunction with Cumulative Supplement No. 3 (Treaty Series 1975, No. 1), annual volumes on treaty action in the Treaty Series, and annual volumes on International Treaties and Conventions to which Australia has not yet become a party, in the series 'Select Documents on International Affairs'. These publications are available from Australian Government Publishing Service bookshops in State capital cities.

Cultural relations

The Department of Foreign Affairs administers a program of cultural exchanges with other countries in furtherance of the Government's foreign policy objectives. The program includes exchanges in the performing and visual arts, sport, film and literature as well as academic exchanges. The Department co-operates and consults with appropriate Australian organisations.

Australia has cultural agreements with France, Greece, India, Indonesia, Iran, Italy, Japan, Republic of Korea, Malaysia, the Philippines, Romania, Singapore, Thailand, Yugoslavia and China. (The activities under an agreement with the USSR have, however, been suspended since its invasion of Afghanistan.)

Australian Aid Program—1982–83

Australia's development assistance program is directed towards promoting the economic and social advancement of developing countries, particularly in Asia and the Pacific. It aims to meet the expressed needs of these countries and is directed towards key activities in their economies, such as rural development. All of Australia's aid is given on grant terms and a significant proportion is untied.

About 80 countries receive assistance, but Australia's efforts are aimed principally at assisting its nearest neighbours—Papua New Guinea (PNG), the South Pacific region and member countries of the Association of South East Asian Nations (ASEAN).

In 1983–84, Australia expects to spend about $836 million on official development assistance, an increase of about $92 million or 12.4 per cent more than in 1982–83. Of this amount $621 million (74 per cent) will be provided as bilateral aid given directly to the governments of developing countries. The major elements of the bilateral program are budgetary support for PNG, project aid (equipment, goods and expertise), the education of Third World students and trainees, food aid and assistance through non-government organisations.

In addition, $199 million has been allocated to multilateral agencies. Support provided to these bodies has been increased by $22 million over 1982–83.

Papua New Guinea

About 48 per cent of Australia's bilateral aid goes to PNG because of a special relationship with the country based on long historical association.

This year Papua New Guinea will receive $302 million in assistance. The bulk of this amount ($288 million) will be in the form of an untied grant for budgetary support. This amount represents the third payment under a five-year aid agreement negotiated between the Australian and Papua New Guinea Governments in September 1980 and amended in 1983. As with the first five-year aid agreement which ended in 1980–81, the purpose of this long-term aid arrangement is to provide PNG with a practicable framework in which to plan its development.

In addition to the budget support grant, Australia meets the cost of termination payments and retirement benefits due to former employees and provides training for Papua New Guineans. This training is incorporated into the PNG/Australia Technical Co-operation Program. This program also includes a jointly funded technical assistance program which will provide services and related equipment to increase the technical capacity and capability of Papua New Guinea.

Bilateral projects

Most of Australia's bilateral aid to countries other than PNG is for specific development activities undertaken by the developing countries. These range from large-scale regional development programs to simple facilities in villages. Australia is supporting some 500 projects in over 40 countries. Generally, Australia meets the foreign exchange costs of a project, but it also pays, in an increasing number of cases, some of the local costs associated with projects.

South East Asia receives the bulk of Australia's bilateral project aid. Many of the 82 projects in the region involve infrastructure development work, agricultural improvements through crop and livestock research as well as practical extension work. In recent years Australia has become increasingly involved in large-scale, integrated rural development programs intended to bring about the balanced growth of whole regions, particularly in Indonesia, the Philippines and Thailand.

Expenditure on research projects and other activities under the ASEAN-Australia Economic Co-operation Program will amount to $13 million in 1983–84.

To assist countries of the South Pacific in their forward development planning the Australian Government has confirmed an indicative planning figure of $300 million for aid in the region for the five-year period 1983–84—1987–88. Most of the expenditure associated with this commitment is in the form of bilateral project aid for Fiji, Tonga, Western Samoa, Solomon Islands, Vanuatu, Kiribati, Tuvalu, Cook Islands and Niue.

A large number of projects are being undertaken. This reflects the small-scale nature of island economies. These projects cover a wide range of activities and include assistance with transport, rural development, water and sewerage schemes, telecommunications and upgrading health facilities. To keep pace with the changing requirements of the region, new forms of aid have been introduced over recent years. For example, one particular form of assistance which was given increasing prominence in 1982–83 was the funding of joint ventures in the region. $1.75 million earmarked was to provide grants for the purchase of island equity in joint ventures with Australian companies. The South Pacific countries should benefit from this through income and employment creation.

There are a number of special forms of bilateral aid delivery.

Staffing Assistance Schemes. The need for skilled manpower is a major requirement in most developing countries and Australia seeks to assist in this regard through staffing assistance schemes. Staffing assistance is provided to some 17 developing countries and involves the supplementation of local salaries paid to Australian nationals to fill positions in the public service of the recipient countries. The main regions assisted in this way are the South Pacific and Africa. In 1983–84 $6.4 million will be provided in support of staffing assistance schemes.

Development Imports Grants. These grants are provided to certain low income developing countries in the South Pacific, Africa and South Asia to meet the cost of importing developmental Australian goods and services. In 1983–84 $9.3 million will be allocated for this purpose.

Development Import Finance Facility (DIFF). This scheme enables recipients of Australian aid to purchase needed capital goods and services from Australia on better terms than are available under other forms of concessional finance. The facility combines grant aid funds with loans provided by the Export Finance and Insurance Corporation (EFIC) and thereby enables Australian exporters to offer a financial package comparable with 'mixed credits' offered by other donor Governments. The facility was introduced into the aid program in 1980–81 and was limited to ASEAN countries. It was expanded in 1982 to apply to all Australian aid recipients. Total aid funds allocated to the DIFF scheme in 1983–84 amount to $10 million.

Co-financing Facility. The co-financing facility with the World Bank, which was introduced into the aid program last year, allows Australia to support major high priority development projects being assisted by the World Bank. Australian involvement in such projects is in the Asia/Pacific region. This new facility, which has attracted considerable interest from private sector bodies, opens up new opportunities for Australian contractors and suppliers of goods and services to participate in large World Bank funded projects. In consultation with the World Bank, a program has been developed which concentrates on project preparation studies in important sectors in Australia's major aid recipients. This is seen as a valued aid form by these recipients as the provision of Australian technical and professional contributions to the preparation studies facilitate access to Bank finance. In 1983–84 the allocation of funds to the co-financing facility will be increased significantly to a total of $10 million.

Training

During 1983–84 within a budget of $32 million, Australia will sponsor about 3,600 people to study in Australia and Third World countries. The training program is designed to assist people from Asia, Africa and the Pacific and Indian Ocean regions to develop the skills needed for social and economic development.

Australia's training program seeks to encourage recipient governments to relate their requests for training to their national development priorities. The aim is a matching of the Australian expertise with the requirements of recipient governments, whose role is to decide who should be nominated for scholarships and to indicate the level of training required and the field of study.

Within Australia the training includes individual training awards to regular Australian courses and special group courses known as Australian Development Assistance Courses, some of which are run in the International Training Institute in Sydney. Courses include studies in agriculture, health, engineering, education and management.

Funding for the Australian Universities International Development Program (formerly the Australian Asian Universities Co-operation Scheme) will account for approximately $5.2 million. The primary focus of the program is on agriculture, food production and population studies. Assistance is given in teaching, research and a variety of short courses.

Food aid and food security

There is an increasing gap between food demand and supply in many developing countries. This has been aggravated by population pressure and the progressive destruction of agricultural land. Australia is responding to this problem in two ways: by addressing the short-term problem of food shortages with food aid; and by helping developing countries to supply more of their own food requirements in the long term.

In 1983–84, some $103 million will be utilised in providing food aid.

The Government is committed under the Food Aid Convention (FAC) to provide a minimum of 400,000 tonnes of foodgrain annually. While retaining a substantial bilateral food aid program, the Government announced last year that Australia would in future draw to a greater extent on the capacities and skills of the World Food Program (WFP) in distributing and monitoring the food aid program. In 1983–84, 40 per cent of the FAC commitment will be channelled through the WFP and by 1984–85 this will be increased to 50 per cent. It is expected that this will increase the effectiveness of the program because of the WFP's skill in using food aid in association with projects which develop rural infrastructure and stimulate agricultural production.

Australian bilateral foodgrain is provided to food-deficit countries taking into account such factors as food consumption requirements, GNP per capita, calorie consumption, infant mortality rates and life expectancy levels, international reserves, import capacity, crop outlook and increasingly, emergency needs. With these factors taken into account, Australia has found that an increasing portion of the program is being provided to meet particularly severe food problems facing African countries.

There is a growing emphasis in the program on meeting emergency needs brought about by unfavourable climatic conditions, refugee flows and other factors. In addition to food supplied from the FAC commitment, Australia also meets these emergency needs from a special 50,000 tonne allocation to the International Emergency Food Reserve.

Apart from foodgrain, an allocation of $5 million will be set aside to provide non-grain foods such as high protein biscuits for use in feeding projects for vulnerable groups and for emergencies.

In 1983–84, funds available for use in other food security schemes will be increased to $5.2 million. Australia attaches importance to measures intended to improve food production, marketing and distribution.

A further major initiative in the food security sector has been the establishment in 1982 of the Australian Centre for International Agricultural Research (ACIAR). The establishment of ACIAR was announced in 1981 and in 1982 the Centre entered into its first contracts with Australian agricultural institutions to undertake research work into agricultural problems facing developing countries. A trust fund for ACIAR has been established with the Government agreeing to an initial three-year commitment of $25 million. In 1983–84 $7.0 million was allocated to the Centre.

Non-Government Organisations (NGOs)

The Australian Government gives financial assistance to a number of Australian Non-Government Organisations (NGOs) for their development assistance activities. Support for these organisations this year will amount to approximately $8 million.

The principal avenue of Government/NGO co-operation is a Project Subsidy Scheme under which eligible NGOs are assisted to undertake a variety of small scale projects at 'grass roots' level in developing countries. In 1982-83 some $4.8 million was provided for this purpose.

Some $1.5 million is also provided for schemes utilising the skills of Australian Volunteers. In addition to the long running Australian Volunteers Abroad scheme, a further scheme known as the Australian Executive Service Overseas Program was introduced in 1981.

A number of international NGOs will also be supported again in 1983-84 such as the International Committee of the Red Cross. In total, support for these activities will amount to approximately $1.5 million.

Multilateral aid

Australia contributes to several international organisations and financial institutions concerned with aid to developing countries. They include the World Bank Group, Asian Development Bank, United Nations Development Program and other UN agencies, International Fund for Agricultural Development, Commonwealth Fund for Technical Co-operation, Economic and Social Commission for Asia and the Pacific (ESCAP), South Pacific Bureau for Economic Co-operation (SPEC), South Pacific Commission (SPC) and various international science, technology and research centres.

Support for these bodies provides Australia with an opportunity to participate in major development projects which are beyond the resources of individual donors.

Contributions in 1983-84 to international financial institutions are estimated at $105 million. Included in this amount is $70 million which will be provided to the International Development Association, the soft-lending affiliate of the World Bank, which directs its work towards assisting the poorest countries. Other major contributions in 1983-84 involve expenditure of some $15 million to the Asian Development Fund, $11.7 million for the International Bank for Reconstruction and Development and $6.2 million for the Asian Development Bank.

Payments to UN, regional and international agencies in 1983-84 are estimated at $95 million (including $35 million to the WFP).

The UN Development Program (UNDP) is the largest UN funding agency for technical assistance. It also plays a co-ordinating role within the UN system in the technical co-operation field. An increase of $1.5 million will be made in Australia's contribution to UNDP in 1983-84. UNICEF directs its main efforts to furthering the interests of children and young people in developing countries, and the UNFPA is directly concerned with assistance related to population problems. As mentioned previously, the United Nations High Commissioner for Refugees (UNHCR) and United Nations Relief and Work Agency (UNRWA) work to assist refugees, the former being engaged world-wide and the latter having a specific charter to assist Palestinian refugees. Support will also be given to other UN organisations such as the UN Disaster Relief Organisation and the UN Industrial Development Organisation.

With regard to Commonwealth-related concerns, a $5.7 million contribution to the Commonwealth Fund for Technical Co-operation is provided to meet priority technical assistance needs of developing Commonwealth countries. Over $7 million is included this year to meet Commonwealth commitments.

In 1983-84 $6.5 million will be provided for the international science, technology and research programs including support of a number of international agricultural research institutions within the Consultative Group on International Agricultural Research (CGIAR).

Refugees and relief

It appears that massive refugee flows have become a long-term part of international affairs. The 10 million men, women and children who live as refugees and displaced persons throughout the world are the victims of political tension or instability, social upheaval and related economic hardships and continuing infringements of human rights. The refugee problem is an international question of grave humanitarian and political discussions which has become a major foreign policy concern.

Refugee issues will continue to be a significant element in Australian foreign policy considerations and important in our relations with countries affected by refugee movements. Australia is well-known for its long-standing practice of responding with compassion to refugee problems around the globe. This is shown both in resettlement and assistance for refugees and through timely and generous contributions to NGOs active in refugee relief. Since 1978, Australia has provided some $114 million in humanitarian assistance to refugees and displaced persons. In 1983-84 approximately $6.4 million will be available (in addition to food aid) to provide for emergency relief. Australia is currently the fourth largest contributor to the budget of the United Nations High Commissioner for Refugees (UNHCR).

Consular

The Department of Foreign Affairs is responsible to the Minister for the protection and welfare of Australian citizens and their interests overseas. Consular services to the Australian public are available from Australian diplomatic and consular posts throughout the world.

Australia's Consular Service continued to operate effectively in a changing domestic and international environment, during 1982, on the basis of well established policies and a traditional general philosophy. During the year, Australia's overseas posts dealt with about 100,000 requests for consular assistance, including 217 cases of Australians dying abroad and the arrest of 161 others.

However, the year 1982 also heralded the beginnings of a determined effort by Australia to actively research and develop consular policies which will more clearly reflect Australian values, open government and Australia's commitment to the defence of its citizens' human rights.

The stimulus for this development is a public and political recognition that dynamic change is necessary in the near future if Australia is to keep pace with rising international standards of consular service. Among the more visible changes likely to stem from this research and development, is a series of bilateral and multilateral treaties covering subjects such as consular relations, the treatment of dual nationals and the voluntary international transfer of prisoners.

Australian missions overseas

As at 31 August 1983, Australia maintained the following diplomatic and consular missions overseas. Full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T. 2600.

Embassies

Afghanistan (in Pakistan); Algeria; Argentina; Austria; Bahrain; Belgium; Bolivia (in Chile); Brazil; Bulgaria (in Yugoslavia); Burma; Chile; China; Colombia (in Venezuela); Costa Rica (in Mexico); Czechoslovakia (in Poland); Denmark; Ecuador (in Venezuela); Egypt; Ethiopia (in Kenya); Finland (in Sweden); France; Gabon (in Nigeria); German Democratic Republic; Germany, Federal Republic of; Greece; Guatemala (in Mexico); Hungary (in Austria); Indonesia; Iran; Iraq; Ireland; Israel; Italy; Ivory Coast (in Ghana); Japan; Jordan; Korea, Republic of; Kuwait; Laos; Lebanon; Libya; Luxembourg (in Belgium); Madagascar (in Tanzania); Maldives, Republic of (in Sri Lanka); Mexico; Mongolia (in U.S.S.R.); Morocco (in France); Nepal (in India); Netherlands; Norway (in Sweden); Oman (in Jeddah); Pakistan; Panama (in Mexico); Paraguay (in Argentina); Peru; Philippines; Poland; Portugal; Qatar (in Saudi Arabia); Romania (in Yugoslavia); Saudi Arabia; Senegal (in Ghana); South Africa; Spain; Sudan (in Egypt); Sweden; Switzerland; Syria; Thailand; Tunisia (in Algeria); Turkey; Union of Soviet Socialist Republics; United States of America; Venezuela; Vietnam, Socialist Republic of; Yugoslavia.

High Commissions

Bahamas (in Jamaica); Bangladesh; Barbados (in Jamaica); Botswana (in Zimbabwe); Britain; Canada; Cyprus; Fiji; Ghana; Grenada (in Jamaica); Guyana (in Jamaica); India; Jamaica; Kenya; Kiribati; Lesotho (in South Africa); Malaysia; Malta; Mauritius (in Tanzania); Nauru; New Zealand; Nigeria; Papua New Guinea; Seychelles (in Kenya); Singapore; Solomon Islands; Sri Lanka; Swaziland (in South Africa); Tanzania; Tonga; Trinidad and Tobago (in Jamaica); Tuvalu (in Fiji); Uganda (in Kenya); Vanuatu; Western Samoa; Zambia; Zimbabwe.

Commissions

Hong Kong; Brunei.

Other

Mission to—European Communities (Brussels); United Nations (New York); United Nations (Geneva); United Nations Educational, Scientific and Cultural Organisation (Paris); Organisation for Economic Co-operation and Development (Paris); United Nations Industrial Development Organisation (Vienna); Australian Delegation to Multilateral Trade Negotiations (Geneva).

Consulate-General in—New York, Chicago, San Francisco, Los Angeles, Houston and Honolulu; Osaka; Auckland; Milan; Toronto and Vancouver; Rio de Janeiro; Bombay; Bahrain; and Abu Dhabi.

Consulate in—Edinburgh and Manchester; Geneva; Noumea; Bali and Capetown.

Specialist officers of the Department of Trade and Resources (formerly the Department of Overseas Trade), other Australian Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs.

Passports

A total of 575,500 Australian passports were issued in 1982.

Following the issue of Interim Report No. 2—*Passports of the Royal Commission of Enquiry Into Drug Trafficking*, Government announced that a number of measures would be introduced to minimise passport fraud. These measures included personal attendance of all passport applicants; improved co-operation amongst departments and law enforcement agencies involved with passports and visas; a requirement for all applicants to provide full birth certificates showing names of both parents so that these could be recorded on computer and to minimise the opportunity for people to establish false identities; limitation on the categories of people who can certify the identity of applicants; and the introduction of post offices as lodgement centres for passports—both to provide an infrastructure whereby all applicants can be interviewed and to improve the security checking.

These improvements to the passport issuing system will be introduced progressively during 1983 and 1984.

CHAPTER 6

DEMOGRAPHY

The sources of the statistics in this chapter are population censuses, population surveys, State and Territorial registers of births, deaths and marriages, records of courts dealing with divorce, and other administrative records such as passenger cards required from international travellers and records of family allowance transfers.

With the proclamation of the *Constitution Alteration (Aboriginals) Act* 1967 on 10 August 1967, the provision in Section 127 of the Constitution requiring the exclusion of Aboriginals in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth was repealed. Accordingly, population and vital statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aboriginals. Also, estimates for periods back to 30 June 1961 have been revised to include Aboriginals.

THE POPULATION

The population census

Basic enumerations of the population have been made since the early days of settlement in Australia. The early enumerations were known as 'musters'. A census conducted in New South Wales in 1828 became the first in a series of regular censuses in that colony. Periodic censuses were taken in the other Australian colonies. The first simultaneous censuses of all the Australian colonies were taken in 1881. The first national census was taken in 1911. It was followed by others in 1921, 1933, 1947, 1954, 1961 and at five yearly intervals thereafter. A special article on early censuses appears in Year Book No. 15 of 1922. A further article outlining the history, purposes, legal basis, organisation and publication of results of population censuses appears in Year Book No. 53 of 1967, pages 164 70, but note that the reference in that Year Book to the exclusion of Aboriginals from the census count has not applied since the repeal of the relevant provision of Section 127 of the Constitution (see above).

Every census from 1881 has inquired into age, sex, marital status, birthplace, nationality or citizenship, and occupation. A wide variety of other topics has been included from time to time.

The most recent census in Australia was conducted on 30 June 1981. Counts of persons and dwellings are available for every collection district and for other larger areas, as well as statistics on characteristics of persons and dwellings as collected in the census. 1981 Census statistics will continue to be released in publications, on microfiche and on magnetic tape until 1985. A list of 1981 Census publications is contained in *Census 81—Data Release Plans* (2142.0) and details of other releases are in *Catalogue of 1981 Census Tables, Edition 2* (2139.0).

The 1981 Census contained fewer questions than the 1976 Census. However, in addition to basic demographic topics mentioned above, questions were asked on such topics as previous residence, birthplace of parents, English language proficiency, Aboriginality, religious affiliation, school attendance, educational qualifications, income, employment, mode of travel to work and certain characteristics of dwellings.

As for previous censuses, foreign diplomatic personnel and their families were out of the scope of the census, as were all persons residing in diplomatic residences on census night.

While every effort is made to minimise undercounting in the census, some inevitably remains for various reasons (e.g. inadvertent omission of very young children, treatment of some dwellings as unoccupied when in fact, they were occupied, and failure to find all dwellings). Refusal by householders to complete the census schedule is not a significant cause of undercounting. Since 1966, sample surveys have been taken soon after each census to discover the approximate extent of underenumeration and the effects on the census results of misstatement or nonreply to specific questions. Underenumeration of the population of Australia at the 1981 Census is estimated to have been 1.9 per cent. Estimated underenumeration of State and Territory populations ranged from 0.8 per cent in Tasmania to 5.0 per cent in the Northern Territory. Underenumeration varies from location to location and for populations of different ages and other characteristics. These and similar problems are common to all population censuses.

Population estimates

Population estimates by sex and State are calculated on a quarterly basis by updating estimates at census dates for subsequent births and deaths and for overseas and interstate migration. Age estimates as at 30 June each year are published by sex for each State and Territory. Small area population estimates down to the local government area level are also made annually.

The method of determining the base population at a census date has changed with the 1981 Census results becoming available. Estimates now reflect the usual residence of the population rather than the actual location in which people were counted at the census. At the Australia level this means that overseas visitors counted in the census are subtracted, the remaining population is adjusted for census underenumeration and an estimate of Australian residents temporarily overseas on census night is added. For the States this process involves an additional step which returns those people not at home on census night to their place of usual residence.

This change-over has enabled population estimates after the 1981 Census date to be compiled wholly according to place of usual residence, since components of population increase were already available on a usual residence basis. Estimated resident populations for the 1971 and 1976 Census dates have also been calculated and intercensal estimates have been revised accordingly.

As a result of the above adjustments, estimated resident populations at census dates differ from actual census counts. The figures for estimated resident populations (with actual location census counts shown in brackets) are: 13,067,300 (12,755,638) in 1971; 14,033,100 (13,548,448) in 1976; and 14,923,300 (14,576,330) in 1981.

Size and growth of Australia's population

When Europeans first settled in Australia, there are believed to have been at least 300,000 Aboriginals. The Aboriginal population suffered a drastic decline in numbers over the next 145 years so that by 1933 it is estimated to have totalled about 67,000. In 1981, however, nearly 145,000 Aboriginals were counted in the census.

The population of Australia reached 1 million in 1858, 5 million in 1918, 10 million in 1959 and 15 million towards the end of 1981.

From 1861 natural increase has been the major element in population growth, and immigration the most variable. In the years 1861 to 1890, total growth on average exceeded 3 per cent a year and natural increase 2 per cent. The rate of natural increase declined during the last decade of the nineteenth century and the first decade of the twentieth century, and this, together with a near cessation of immigration during that period, reduced the rate of growth from 3.70 per cent in 1861–70 to 1.63 per cent in 1901–10.

The 1914–18 War was the dominating influence in the decade 1911–1920: during the war and immediate post-war years the birth rate rose and immigration was resumed. In the economic depression of the 1930s, however, natural increase fell to very low levels and immigration ceased; indeed, in some years, overseas departures exceeded arrivals.

With the outbreak of the 1939–45 War, Australia entered a new phase. The immediate effect of the war was to increase the number of marriages and births. The increasing births more than offset the rise in deaths due to war casualties and higher civilian death rates. Migration in these years was negligible.

The period 1947 to 1961 was marked by continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952.

Between 1961 and 1970, net migration continued at about the same level as in the previous decade, but there were declines in the crude birth rate and the rate of natural increase. The years from 1971 till 1980 were characterised by a reduced rate of natural increase due to a decline in the birth rate. In 1981, however, the crude birth rate rose for the first time since 1971, to 15.8 per 1,000 mean population (15.3 in 1980), and this rate was maintained in 1982. Net migration gain, moderate for most of the seventies, increased sharply during 1979, 1980 and 1981, following changes in migration intake targets and Australia's acceptance of a large number of Indo-Chinese refugees as settlers. However, preliminary figures for 1982 together with reduced migration intake targets suggest that net migration gains are again coming down to more moderate levels.

The rate of population growth in 1981 was 1.63 per cent, the highest since 1971 (2.08 per cent), while the preliminary growth rate for 1982 decreased to 1.51 per cent. The population estimates in the following table relate to the end of December. Estimates for the end of June are given in other tables in this Chapter.

POPULATION AND COMPONENTS OF GROWTH

		Average annual rate of growth (b) (per cent)		
Period	*Population at end of period ('000) (a)*	*Natural increase*	*Net migration (c)*	*Total*
1851–1860	1,145.6			
1861–1870	1,647.8	2.47	1.23	3.70
1871–1880	2,231.5	2.07	1.01	3.08
1881–1890	3,151.4	2.05	1.46	3.51
1891–1900	3,765.3	1.73	0.07	1.80
1901–1910	4,425.1	1.53	0.10	1.63
1911–1920	5,411.3	1.60	0.43	2.03
1921–1930	6,500.8	1.32	0.53	1.85
1931–1940	7,077.6	0.79	0.06	0.85
1941–1950	8,307.5	1.14	0.47	1.62
1951–1955	9,311.8	1.38	0.93	2.31
1956–1960	10,391.9	1.40	0.82	2.22
1961–1965	11,505.4	(*e*) 1.27	(*e*) 0.71	(*e*) 1.98
1966–1970	12,663.5	1.11	0.82	1.94
1971–1975	13,968.9	(*d*)1.07	(*d*)0.49	(*d*)1.56
1976–1980	14,807.4	0.81	0.45	1.17
1975	13,968.9	0.90	0.10	0.99
1976	14,110.1	0.82	0.24	1.01
1977	14,281.5	0.83	0.48	1.21
1978	14,430.8	0.81	0.33	1.05
1979	14,602.5	0.81	0.48	1.19
1980	14,807.4	0.80	0.69	1.40
1981	15,049.5	0.86	0.82	1.63
1982*p*	15,276.1	0.83	0.67	1.51

(*a*) Excludes full-blood Aboriginals prior to 1961. Estimated resident populations from 1971 onwards. (*b*) The average annual rates of population growth for periods greater than one year are calculated on the compound interest principle. The rates refer to the population at the beginning of the period. Discrepancies between the sum of the rate of growth due to natural increase and net migration and the rate of total growth are due to intercensal adjustments. (*c*) Prior to 30 June 1971, net migration includes discrepancies disclosed by the various censuses. From 30 June 1971, net migration is defined as the excess of overseas arrivals over overseas departures classified as permanent and long-term. From 30 June 1976, net migration consists of net permanent and long-term movement and an adjustment for category jumping, i.e. the net effect of changes in travel intentions which affect the categorization of movements. (*d*) The estimated resident population at 31 December 1970 used to compute rates of growth for the period 1971–1975 was 12,929,600. (*e*) The estimated population at 31 December 1960 used to compute rates of growth for the period 1961-65 was 10,430,600. This estimate includes Aboriginals.

Projections of the population

Projections of Australia's population have been made by the ABS using the component method in which a base population is brought forward year by year by applying assumptions about future levels of fertility, mortality and the characteristics of overseas migration.

The 1982 projections presented in the following table give a possible 2021 population in the range 22.1 million to 26.0 million.

Assumptions used in 1982 projection series—

Base population: The four series are based on the preliminary estimated resident population of Australia at 30 June 1981.

Series A: *Fertility*—Total fertility rates for Australia are assumed to recover initially to a level of 2,010 births per thousand females by 1984, and then decline to 1,900 in 1987, remaining constant thereafter. This 1987 level is about 10 per cent below replacement level.

Mortality—The 1971–80 average annual rates of decline in the age-specific death rates are assumed to continue until 1986. From 1987 to 2021 the age-specific death rates are projected to converge linearly to 2021 rates obtained by applying 1961–80 rates of decline for the period 1982–2021.

Migration—Net overseas migration to Australia is set at 75,000 persons per year.

Series B: *Fertility*—Total fertility rates for Australia are assumed to recover from 1,936 births per thousand females in 1981 to long-term replacement level of 2,110 by 1987, remaining constant thereafter.

Mortality—as in Series A.

Migration—as in Series A.

Series C: *Fertility*—as in Series A.
Mortality—as in Series A.
Migration—Net overseas migration to Australia is set at 125,000 persons per year.
Series D: *Fertility*—as in Series B.
Mortality—as in Series A.
Migration—as in Series C.

The effect of the alternative fertility assumptions on projected populations can be seen in the table below by comparing Series A with Series B or by comparing Series C with Series D. Similarly comparisons between Series A and Series C or between Series B and Series D will bring out the differences due to the alternative migration assumptions.

POPULATION: ACTUAL AND PROJECTED
('000)

		Projected population				
		1982 Projections				
At 30 June	*Actual population(a)*	*At 30 June*	*Series A*	*Series B*	*Series C*	*Series D*
1947	7,579.4	1981(*b*)	14,926.8	14,926.8	14,926.8	14,926.8
1954	8,986.5	1982	15,129.0	15,129.0	15,179.5	15,179.6
1961	10,548.3	1983	15,335.9	15,336.6	15,438.0	15,438.7
1966	11,599.5	1984	15,550.0	15,552.5	15,704.6	15,707.1
1971	13,067.3	1985	15,766.7	15,776.5	15,974.9	15,984.8
1976	14,033.1	1986	15,981.1	16,006.9	16,243.8	16,270.1
1977	14,192.2	1991	17,008.6	17,169.0	17,555.8	17,721.3
1978	14,359.3	1996	17,994.2	18,297.8	18,843.9	19,160.0
1979	14,515.7	2001	18,916.7	19,365.4	20,084.1	20,555.1
1980	14,695.4	2006	19,760.2	20,359.6	21,261.4	21,895.5
1981	14,923.3	2011	20,557.1	21,332.9	22,408.5	23,235.0
1982	15,178.4	2016	21,328.7	22,331.9	23,544.7	24,619.5
1983p	15,369.2	2021	22,062.1	23,337.1	24,653.4	26,026.1

(*a*) Prior to 1971 population figures are census counts. For 1971 and subsequent years figures shown are estimated resident populations. Figures prior to 1961 exclude Aboriginals. (*b*) Base population; preliminary estimated resident population.

Without further immigration, Series A (and C) projections yield a population of 17.2 million by the year 2001 and of 18.1 million by the year 2021; Series B (and D) projections, without immigration, give populations of 17.6 million for 2001 and 19.3 million for 2021.

For all four series, the annual rate of growth would monotonically decrease as a consequence of the increasing crude death rate, the falling crude birth rate and the decreasing rate of net immigration. The median age would continuously increase as a result of the population becoming older. This ageing of the population is also reflected in an increase in the crude death rate whilst age-specific mortality rates are projected to decrease.

PROJECTED ANNUAL RATES OF GROWTH AND MEDIAN AGES (*a*) AUSTRALIA 1981 TO 2021

	Year ending 30 June	*Series A*	*Series B*	*Series C*	*Series D*
Birth rate (per cent)	1981p	1.57	1.57	1.57	1.57
	1986	1.60	1.70	1.60	1.70
	1991	1.52	1.67	1.53	1.69
	1996	1.46	1.59	1.47	1.61
	2001	1.38	1.50	1.39	1.52
	2006	1.31	1.43	1.33	1.45
	2011	1.29	1.43	1.31	1.45
	2016	1.27	1.44	1.30	1.47
	2021	1.25	1.43	1.28	1.45
Death rate (per cent)	1981p	0.74	0.74	0.74	0.74
	1986	0.72	0.72	0.71	0.71
	1991	0.76	0.76	0.75	0.74
	1996	0.80	0.79	0.78	0.77
	2001	0.83	0.81	0.80	0.79
	2006	0.86	0.83	0.82	0.80
	2011	0.83	0.85	0.85	0.82
	2016	0.91	0.87	0.87	0.83
	2021	0.94	0.90	0.90	0.85
Net immigration (per cent)	1981p	0.87	0.87	0.87	0.87
	1986	0.47	0.47	0.78	0.77
	1991	0.44	0.44	0.72	0.71
	1996	0.42	0.41	0.67	0.66
	2001	0.40	0.39	0.63	0.61
	2006	0.38	0.37	0.59	0.57
	2011	0.37	0.35	0.56	0.54
	2016	0.35	0.34	0.53	0.51
	2021	0.34	0.32	0.51	0.48
Total rate of growth (per cent)	1981p	1.60	1.60	1.60	1.60
	1986	1.36	1.45	1.67	1.77
	1991	1.20	1.35	1.50	1.65
	1996	1.08	1.22	1.36	1.50
	2001	0.95	1.08	1.22	1.34
	2006	0.83	0.96	1.10	1.22
	2011	0.77	0.92	1.03	1.17
	2016	0.72	0.91	0.96	1.14
	2021	0.65	0.86	0.89	1.08
Median age (years)	1981p	29.61	29.61	29.61	29.61
	1986	30.86	30.81	30.71	30.66
	1991	32.18	31.88	31.91	31.63
	1996	32.59	32.99	33.15	32.64
	2001	33.61	33.88	34.20	33.44
	2006	35.84	34.89	35.30	34.35
	2011	37.01	35.67	36.31	34.99
	2016	37.68	35.87	36.87	35.18
	2021	38.24	36.17	37.44	35.52

(*a*) The median age indicates the age at which one half of the population is younger and the other half older.

Location of the population

For historical, climatic and economic reasons the population of Australia is concentrated in capital cities and other major cities, mainly on the south and east coasts of the continent. In June 1982, 70.04 per cent of the population lived in the national capital, the six State capital cities and Darwin, and four other major cities of 100,000 or more persons (capital city statistical divisions and statistical districts). Of these, only Canberra is located inland. The percentage of the population living in rural areas declined over the years as the major cities and towns attracted most of the population growth; there were periods when the rural population actually declined in numbers. This trend, however, slowed considerably after 1971 and between 1976 and 1981 it actually reversed, so that a higher percentage of the population was counted in rural areas at the 1981 Census (14.2 per cent) than at the 1976 Census

(13.9 per cent). In 1982, New South Wales was the State with the highest per cent of the estimated resident population living in the capital city or towns of over 100,000 (75.3 per cent), followed by Victoria (74.6 per cent), South Australia (72.3 per cent), Western Australia (71.0 per cent), Queensland (52.9 per cent) and Tasmania (40.1 per cent). In the Northern Territory, 47.1 per cent of the estimated resident population lived in the capital city.

ESTIMATED RESIDENT POPULATION IN CAPITAL CITIES AND OTHER MAJOR CITIES(*a*)

('000)

	30 June 1976	*30 June 1981*	*30 June 1982*
Sydney	3,143.8	3,279.5	3,310.5
Melbourne	2,723.7	2,806.3	2,836.8
Brisbane	1,000.9	1,096.2	1,124.2
Adelaide	924.1	952.7	960.7
Perth	832.8	922.0	948.8
Hobart	164.4	171.1	172.5
Darwin	44.2	56.5	60.9
Canberra (*b*)	226.5	246.5	251.0
Newcastle	380.0	402.7	410.3
Wollongong	222.3	231.4	233.7
Gold Coast (*c*)	110.9	162.7	178.8
Geelong	138.3	142.0	142.9
Total	**9,911.9**	**10,469.6**	**10,631.1**
Percentage of total population	**70.63**	**70.16**	**70.04**

(*a*) Capital city statistical divisions and statistical districts of 100,000 persons or more. (*b*) Includes Queanbeyan. (*c*) Includes Tweed Heads.

While there has been population growth in all States during this time, there has, between 30 June 1971 and 30 June 1983, been substantially higher than average growth in the States of Queensland (33.6 per cent), Western Australia (29.4 per cent), and the two Territories—the Northern Territory (56.4 per cent) and the Australian Capital Territory (56.5 per cent). During this time the total Australian population increased by 17.6 per cent.

POPULATION OF STATES AND TERRITORIES(*a*)

('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.(b)*	*Aust.*
5 April 1891	1,127.1	1,140.1	393.7	315.5	49.8	146.7	4.9	..	3,177.8
31 March 1901	1,354.8	1,201.1	498.1	358.3	184.1	172.5	4.8	..	3,773.8
3 April 1911	1,646.7	1,315.6	605.8	408.6	282.1	191.2	3.3	1.7	4,455.0
4 April 1921	2,100.4	1,531.3	756.0	495.2	332.7	213.8	3.9	2.6	5,435.7
30 June 1933	2,600.8	1,820.3	947.5	580.9	438.9	227.6	4.9	8.9	6,629.8
30 June 1947	2,984.8	2,054.7	1,106.4	646.1	502.5	257.1	10.9	16.9	7,579.4
30 June 1954	3,423.5	2,452.3	1,318.3	797.1	639.8	308.8	16.5	30.3	8,986.5
30 June 1961	3,918.5	2,930.4	1,527.5	971.5	746.8	350.3	44.5	58.8	10,548.3
30 June 1966	4,237.9	3,220.2	1,674.3	1,095.0	848.1	371.4	56.5	96.0	11,599.5
30 June 1971	4,725.5	3,601.4	1,851.5	1,200.1	1,053.8	398.1	85.7	151.2	13,067.3
30 June—									
1974	4,894.1	3,755.7	2,008.3	1,241.5	1,127.6	406.2	102.9	186.2	13,722.6
1975	4,932.0	3,787.4	2,051.4	1,265.3	1,154.9	410.1	(*c*)92.9	199.0	13,893.0
1976	4,959.6	3,810.4	2,092.4	1,274.1	1,178.3	412.3	98.2	207.7	14,033.1
1977	5,001.9	3,837.4	2,129.8	1,286.1	1,204.4	415.0	103.9	213.7	14,192.2
1978	5,053.8	3,863.8	2,172.0	1,296.2	1,227.9	417.6	110.0	218.0	14,359.3
1979	5,111.1	3,886.4	2,214.8	1,301.1	1,246.6	420.8	114.1	220.8	14,515.7
1980	5,171.5	3,914.3	2,265.9	1,308.4	1,269.1	423.6	118.2	224.3	14,695.4
1981	5,234.9	3,946.9	2,345.2	1,318.8	1,300.1	427.2	122.6	227.6	14,923.3
1982	5,307.9	3,994.1	2,419.6	1,328.7	1,336.9	429.8	129.4	231.9	15,178.4
1983*p*	5,354.9	4,034.6	2,473.0	1,340.4	1,363.2	432.2	134.0	236.7	15,369.2
Percentage of total population in 1983*p*	**34.84**	**26.25**	**16.09**	**8.72**	**8.87**	**2.81**	**0.87**	**1.54**	**100.00**

(*a*) Figures before 1961 exclude Aboriginals, later figures do not. The estimates from June 1971 for each State and Territory are estimated resident populations. Intercensal estimates incorporate adjustments to make each intercensal total increase agree with the difference between the estimated resident populations at two consecutive census points. (*b*) Part of New South Wales before 1911. (*c*) Decrease due to the effect of cyclone 'Tracy' on the Darwin population.

Age distribution of the population

The age distribution of the population is shown in Plate 28, page 94, in the form of an age-sex pyramid. The low birth rates of the depression years of the 1930s, the prolonged "baby boom" from the end of World War II to the early 1960s, the declining birth rate of the 1970s and the very recent recovery in the birth rate are reflected in the profile.

ESTIMATED RESIDENT POPULATION BY AGE: 30 JUNE 1982
('000)

Age group (years)	*Males*	*Females*	*Persons*
0–4	591.3	563.4	1,154.7
5–9	632.0	603.0	1,235.0
10–14	691.6	663.0	1,354.6
15–19	659.4	631.8	1,291.2
20–24	674.6	657.2	1,331.8
25–29	634.1	620.0	1,254.1
30–34	623.4	606.4	1,229.8
35–39	545.7	525.8	1,071.5
40–44	444.3	422.8	867.0
45–49	382.1	363.7	745.8
50–54	392.0	374.7	766.7
55–59	373.1	371.0	744.1
60–64	303.4	332.0	635.4
65–69	252.2	289.9	542.2
70+	377.0	577.3	954.3
All ages	**7,576.3**	**7,602.2**	**15,178.4**

The median age of the population has been increasing since the early 1970s. It stood at 29.9 years on 30 June 1982.

MEDIAN AGE OF THE POPULATION *(a)*, SELECTED YEARS 1901-82

	1901	*1921*	*1933*	*1947*	*1961*	*1971*	*1981*	*1982*
Median age (years)	22.5	25.8	27.7	30.7	29.4	27.5	29.6	29.9

(*a*) The median age indicates the age at which one half of the population is younger and the other half older. Based on estimated resident populations from 1971 onwards, prior to 1971 on census counts.

The age distribution of the population has changed gradually in the past decade or so. The proportion of the population aged 65 years and over has increased, due in part to a declining number of births, but also to improvements in life expectancy resulting from a falling death rate.

Substantial levels of immigration have had the effect of reducing the proportion of the population in elderly groups to levels below what it would otherwise have been.

Australia's age profile, with a median age of approximately 30 years, is comparatively younger than that of much of Europe, the original source of most of Australia's population. This is because of a higher rate of natural increase and the effect of immigration to Australia.

The labour force age group

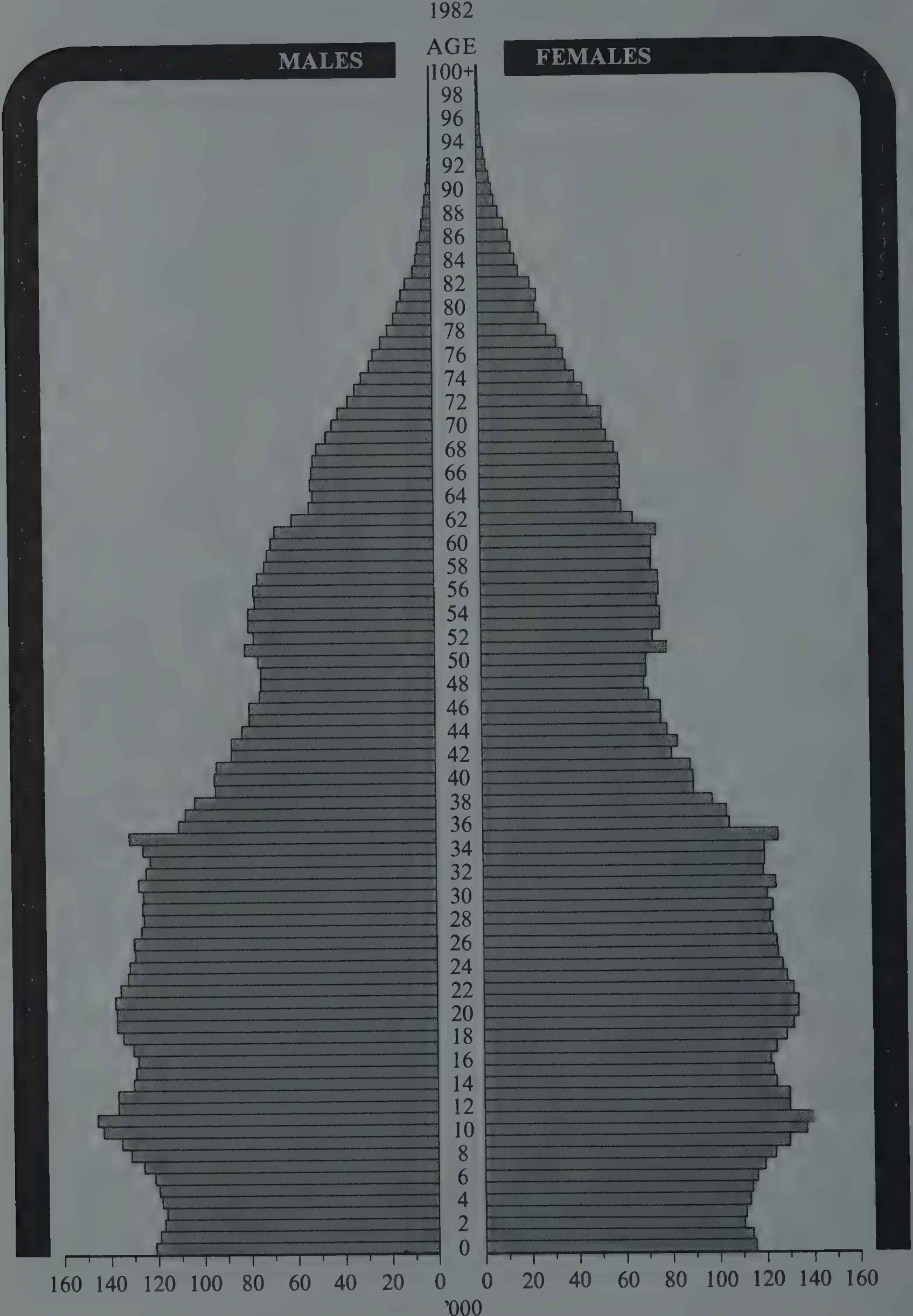
The proportion of the population in the labour force age group (usually defined as the population aged 15-64) increased between 1971 and 1982 from 63.0 to 65.5 per cent of the population. The increase was particularly large in the 15-44 age group.

PERCENTAGE DISTRIBUTION OF THE POPULATION(*a*) BY AGE GROUP: SELECTED YEARS 1947–82

	30 June							
Age group	*1947*	*1954*	*1961*	*1966*	*1971*	*1976*	*1981*	*1982*
				(*per cent*)				
0–14 years	25.1	28.5	30.2	29.4	28.7	27.0	25.0	24.7
15–44 years	45.6	43.1	41.4	42.2	43.0	44.1	46.1	46.4
45–64 years	21.3	20.0	19.9	19.9	20.0	20.0	19.2	19.1
Total 15–64 years	*66.9*	*63.2*	*61.3*	*62.1*	*63.0*	*64.1*	*65.3*	*65.5*
65 years and over	8.0	8.3	8.5	8.5	8.3	8.9	9.7	9.9

(*a*) Prior to 1971, percentages shown are based on census counts; from 1971 they are based on estimated resident populations. Figures prior to 1961 exclude Aboriginals.

AGE PYRAMID OF THE ESTIMATED RESIDENT POPULATION, 1982



POPULATION OF AUSTRALIA : AGE LAST BIRTHDAY, BY SEX, 30 JUNE 1982

PLATE 28

The aged population

The proportion of total population aged 65 years and above was 9.86 per cent in 1982, an increase from 8.34 per cent in 1971 and 8.93 per cent in 1976.

The proportion of females in this group is high; 57.95 per cent of the total in 1982. The female proportion increases with age due to higher male mortality at every age.

ESTIMATED RESIDENT POPULATION BY AGE GROUP: 1971 TO 1982

	Number ('000)				*Per cent*			
30 June	*Under 15*	*15–44*	*45–64*	*65 and over*	*Under 15*	*15–44*	*45–64*	*65 and over*
				MALES				
1971	1,918.6	2,887.4	1,302.6	459.4	29.2	44.0	19.8	7.0
1976	1,940.6	3,158.2	1,407.8	525.5	27.6	44.9	20.0	7.5
1979	1,901.4	3,355.3	1,421.3	575.8	26.2	46.3	19.6	7.9
1980	1,897.6	3,420.9	1,424.8	594.8	25.9	46.6	19.4	8.1
1981	1,904.6	3,496.6	1,434.9	612.2	25.6	46.9	19.3	8.2
1982	1,914.9	3,581.6	1,450.6	629.2	25.3	47.3	19.1	8.3
				FEMALES				
1971	1,828.7	2,734.2	1,305.5	631.0	28.1	42.1	20.1	9.7
1976	1,846.5	3,027.2	1,400.0	727.4	26.4	43.2	20.0	10.4
1979	1,817.0	3,237.1	1,413.9	794.0	25.0	44.6	19.5	10.9
1980	1,813.4	3,306.5	1,418.9	818.5	24.6	44.9	19.3	11.1
1981	1,821.0	3,382.1	1,429.1	842.8	24.4	45.2	19.1	11.3
1982	1,829.4	3,463.9	1,441.5	867.3	24.1	45.6	19.0	11.4
				PERSONS				
1971	3,747.3	5,621.6	2,608.1	1,090.4	28.7	43.0	20.0	8.3
1976	3,787.1	6,185.4	2,807.8	1,252.8	27.0	44.1	20.0	8.9
1979	3,718.4	6,592.4	2,835.1	1,369.7	25.6	45.4	19.5	9.4
1980	3,711.0	6,727.5	2,843.6	1,413.3	25.3	45.8	19.4	9.6
1981	3,725.5	6,878.7	2,864.0	1,455.0	25.0	46.1	19.2	9.7
1982	3,744.3	7,045.5	2,892.1	1,496.5	24.7	46.4	19.1	9.9

Marital status

MARITAL STATUS OF THE POPULATION 1954 TO 1981

(Per cent distribution)

	Never married						
Census	*Under 15*	*15 and over*	*Married*	*Married but permanently separated*	*Widowed*	*Divorced*	*Total*
			MALES				
1954	28.8	21.2	45.5	1.3	2.5	0.7	100.0
1961	30.6	20.7	44.5	1.3	2.2	0.7	100.0
1966	29.9	21.4	44.5	1.3	2.1	0.7	100.0
1971	29.3	20.7	45.6	1.3	2.0	1.0	100.0
1976	27.9	21.0	46.2	1.6	1.9	1.4	100.0
1981	25.8	22.9	45.2	1.8	1.9	2.4	100.0
			FEMALES				
1954	28.2	15.4	46.1	1.5	7.9	0.8	100.0
1961	29.8	14.8	45.1	1.5	7.9	0.8	100.0
1966	28.9	15.7	44.9	1.5	8.1	0.9	100.0
1971	28.2	14.9	46.1	1.5	8.2	1.1	100.0
1976	26.6	15.5	45.9	2.0	8.2	1.8	100.0
1981	24.4	17.3	44.8	2.1	8.4	3.1	100.0

At the 1981 Census the numbers of men and women aged 15 and over were nearly equal, but there were more single men than single women and there were more widows than widowers. The first phenomenon is attributable to women generally marrying about 2 years younger than men, and the second to their greater longevity. In 1981, 30.9 per cent of the male population aged 15 and over was single, 60.9 per cent married (excluding 2.4 per cent married but recorded as permanently separated), 2.5 per cent widowed and 3.3 per cent divorced. For females the figures were 22.9 per cent single, 59.2 per cent married (excluding 2.7 per cent married but permanently separated), 11.1 per cent widowed and 4.1 per cent divorced.

Masculinity ratios

The masculinity ratio of the population is expressed as the number of males per 100 females. This ratio is influenced by the age structure: it is about 105.5 at birth, but higher male mortality gradually erodes the difference so that the numbers of males and females would tend to be about the same soon after age 50 in the absence of migration, and the masculinity ratio progressively declines thereafter. The overall masculinity ratio of the population has been declining to such an extent that it fell below 100 in 1979, the first time since World War I. In 1982 it was 99.66.

MASCULINITY RATIOS IN EACH AGE GROUP (males per hundred females)(*a*)

	Age in years				
30 June	*0–14*	*15–44*	*45–64*	*65 and over*	*Total*
1971	104.92	105.60	99.78	72.80	101.06
1976	105.09	104.33	100.56	72.24	100.44
1979	104.65	103.65	100.53	72.52	99.89
1980	104.64	103.46	100.42	72.66	99.74
1981	104.59	103.39	100.40	72.64	99.64
1982	104.67	103.40	100.63	72.55	99.66

(*a*) Estimated resident populations.

Ethnic composition

The composition of the population has been changing gradually in post-war decades due to changes in both the numbers and the origins of immigrant flows.

At 30 June 1981, persons born outside Australia made up 21 per cent of the population, a slight increase on earlier censuses. This represents a substantially higher proportion than that recorded at the 1947 Census (following the end of World War II) when the proportion was 10 per cent.

PERSONS BY BIRTHPLACE 30 JUNE 1981(*a*)

	Males	*Females*	*Persons*
Australia	5,615,436	5,778,425	11,393,861
UK and Eire	575,375	557,226	1,132,601
New Zealand	89,782	86,931	176,713
Germany (b)	55,126	55,632	110,758
Greece	75,215	71,410	146,625
Italy	149,684	126,199	275,883
Lebanon	26,622	23,001	49,623
Malta	30,628	26,373	57,001
Netherlands	51,863	44,181	96,044
Poland	33,031	26,410	59,441
Yugoslavia	81,527	67,808	149,335
Other Europe	111,208	93,822	205,030
Other Asia	162,146	159,819	321,965
America	48,974	47,273	96,247
Africa	45,609	44,628	90,237
Other Oceania	17,621	18,511	36,132
At sea and not stated	97,229	81,605	178,834
Total	**7,267,076**	**7,309,254**	**14,576,330**

(*a*) Census counts, not adjusted for underenumeration.
(*b*) Includes German Federal Republic and German Democratic Republic.

AUSTRALIAN AND OVERSEAS BORN PERSONS(*a*)
(Per cent)

30 June	*Australian born*	*Overseas born*		*Total*
		U.K. and Eire	*Other*	
1954	85.7	7.4	6.9	**100.0**
1961	83.1	7.2	9.7	**100.0**
1966	81.6	7.8	10.5	**100.0**
1971	79.8	8.5	11.7	**100.0**
1976	79.9	8.2	11.8	**100.0**
1981	78.2	7.8	14.1(*b*)	**100.0**

(*a*) Census counts, not adjusted for underenumeration. (*b*) Includes 'not stated' which was imputed for censuses prior to the 1981 Census.

The Aboriginal population

A brief account was given of the Australian Aboriginal population, its origin and its numbers as estimated from time to time in Year Book No. 17, pages 951–61. A special article by A. R. Radcliffe Brown dealing with the estimated number and distribution of the Aboriginal population at the date of the first settlement of European people on the continent appeared in Year Book No. 23, pages 687–96. For a more recent comprehensive analysis, see "The Aboriginal Population of Australia" by L. R. Smith, ANU Press, Canberra 1980.

The task of collecting data on the Aboriginal population is difficult, raising problems of coverage, definition and reporting. For this reason, statistics, even of the total Aboriginal population, should be treated with caution. This applies particularly to comparison of the changes in numbers from one census to another which can be affected by social attitudes and by changes made in the nature of the question in an attempt to improve coverage and reporting. Analysis of 1976 Census results indicated that some overstatement of the number of Aboriginals and Torres Strait Islanders occurred in the 1976 Census. These issues are discussed in more detail in *Census 81—Aboriginals and Torres Strait Islanders* (2153.0)

COUNTS OF ABORIGINALS AND TORRES STRAIT ISLANDERS (TSI) 30 JUNE 1971, 1976, 1981

	1971(a) number			*1976(b) number*			*1981(c) number*		
State	*Aboriginal*	*TSI*	*Total*	*Aboriginal*	*TSI*	*Total*	*Aboriginal*	*TSI*	*Total*
New South Wales	23,101	772	23,873	37,688	2,763	40,451	33,414	1,953	35,367
Victoria	5,656	715	6,371	12,415	2,345	14,760	5,283	774	6,057
Queensland	24,414	7,508	31,922	31,948	9,396	41,344	33,966	10,732	44,698
South Australia	7,140	159	7,299	9,940	774	10,714	9,476	349	9,825
Western Australia	21,903	278	22,181	25,565	560	26,125	30,749	602	31,351
Tasmania	575	96	671	2,522	421	2,943	2,334	354	2,688
Northern Territory	23,253	128	23,381	23,535	215	23,750	28,680	408	29,088
Australian Capital Territory	248	7	255	769	59	828	763	60	823
Australia	**106,290**	**9,663**	**115,953**	**144,382**	**16,533**	**160,915**	**144,665**	**15,232**	**159,897**

(*a*) 1971 figures include a pro-rating of non-response. (*b*) Any discrepancies between totals and sums of components are due to sampling error. (*c*) Changed editing procedures adopted for 1981 Census results; *see* (2153.0) for details.

Internal migration

The five-yearly censuses and annual internal migration surveys (conducted in conjunction with the labour-force survey) are the principal sources of internal migration data. Estimates of interstate migration are also made from address changes notified to the Department of Social Security. For reasons of timing, methodology, coverage (the surveys for example exclude children under 15) and other constraints, these three data series are not comparable.

Internal migration surveys

Internal migration surveys have been conducted at approximately annual intervals since 1970. The most recent was for the twelve months ended 30 June 1982. In these surveys, the place of usual residence of respondents is compared with that twelve months ago. If they differ, the respondent is classified as a mover. Estimates are made of the numbers and characteristics of movers and non-movers. Movers are further classified by place of origin and place of destination. (Because the estimates are based on information from occupants of a small sample of dwellings, the imprecision due to sampling variability should be kept in mind. Standard errors of estimates are published in the detailed bulletins providing the survey results.)

Recent internal migration surveys show that about 16 per cent of all persons aged 15 and over change their residence within a twelve-month period. Of those who change their residence, about 50 per cent remain within the same capital city and together with another 40 per cent, within the same State or Territory; slightly over 10 per cent are interstate movements.

While the pattern of migration has varied over the years, the age and sex composition of those who changed residence has been rather consistent: the masculinity ratio remains around 50 to 51 per cent and movers show a concentration in the ages 20 to 34 (58 per cent of all movers in the twelve-month period ended 30 June 1982).

INTERNAL MIGRATION(*a*)

(Persons aged 15 years and over)

	Year ended— *30 June 1979*	*30 June 1980*	*31 May 1981*	*30 June 1982 (b)*
		('000)		
Changed usual residence—				
Intrastate—				
Within State capital cities (*c*)	854.4	885.4	924.6	857.2
To and from State capital cities (*c*)	168.0	177.7	170.0	173.9
Within Territories and rest of States	451.5	508.4	520.0	512.1
Total, intrastate	1,473.9	1,571.5	1,614.6	1,543.2
Interstate	179.2	185.6	193.8	208.3
Total	1,653.1	1,757.0	1,808.5	1,751.5
Did not change usual residence	8,672.5	8,783.6	8,931.0	9,188.7
Total	10,325.6	10,540.6	10,739.5	10,940.2
		Movers per thousand of population		
Mobility rate	*160*	*167*	*168*	*160*

(*a*) Non-institutionalised civilians aged 15 years and over at the time of the survey who were resident in Australia at the beginning and end of the survey year. (*b*) Excludes persons resident in Australia but with no usual residence at either or both the beginning and end of the survey year. (*c*) State capital cities exclude Canberra and Darwin.

As well as enumerating persons who changed usual residence the 1982 internal migration survey collected data on the reasons for moving and other aspects of population mobility.

Reasons for moving. The predominant reason for moving, particularly for intrastate movers, was housing. Of all intrastate movers 51 per cent gave housing as the main reason. The next most quoted reason—employment—accounted for only 15 per cent of intrastate moves. On the other hand employment emerged as the main reason for interstate moves. It accounted for 42 per cent of interstate moves, whilst housing only accounted for 12 per cent.

Persons away from their usual residence

Approximately 3.8 per cent of the population were away from their place of usual residence on 30 June 1982—2.3 per cent were elsewhere within the same State, and 1.5 per cent in another State or overseas. The reasons given for stays within the same State were equally divided between "work", "visiting relatives or friends", "holiday" or "other reasons". The reasons for out-of-State stays were predominantly "holiday", which accounted for 46 per cent of stays; this was followed by "visiting relatives or friends" (27 per cent) and "work" (22 per cent).

Not including absences from usual residence on 30 June 1982, 690,800 persons reported at least one stay of 6 weeks or more away from their usual residence during the year ended 30 June 1982. Reasons given were fairly evenly divided between 'visiting relatives or friends', 'work', 'holiday' and 'other reasons'. 'Work'-related stays tended to be of longer duration (approximately 14 weeks on average). 53 per cent of stays were within the State of usual residence, 21 per cent were in another State and 26 per cent were overseas. Of those in the same State the main reason given was 'work' whilst those out of State were usually 'visits to relatives or friends' or 'holidays'.

PERSONS AWAY FROM USUAL RESIDENCE AT 30 JUNE 1982 (*a*)

(Persons aged 15 years and over)

Reason for absence	*Persons ('000)*		*Average duration of stay (weeks)*	
	Staying intra-State	*Staying inter-State*	*Staying intra-State*	*Staying inter-State*
Work	64.6	21.5	5.1	4.1
Visiting relatives or friends	77.2	26.7	1.9	2.9
Holiday	60.6	46.0	1.8	2.6
Other	51.3	4.4	4.0	5.5
Total	253.6	98.6	3.1	3.1

(*a*) Non-institutionalised civilians with usual residence in Australia at 30 June 1981 and 30 June 1982 who were staying away from usual residence at 30 June 1982. Excludes 60,700 persons staying overseas and persons whose duration of stay away from usual residence was not known.

Duration at current usual residence. People in Queensland, Western Australia, the Northern Territory and the Australian Capital Territory, reported the shortest average duration at usual residence of 30 June 1982. Those who had lived at their place of usual residence for less than 1 year numbered 21 per cent of the population in Queensland, 18 per cent in Western Australia, 35 per cent in the Northern Territory and 17 per cent in the Australian Capital Territory. This reflects the higher than average population growth rates of these States and Territories due to gains from interstate migration. The other States all fell within the range 12-15 per cent.

DURATION OF STAY AT USUAL RESIDENCE OF 30 JUNE 1982

(Persons aged 15 years and over) (*a*)

('000)

Duration of stay at usual residence of 30 June 1982	*State of usual residence at 30 June 1982—*								
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1-12 weeks (*b*)	145.3	106.2	104.1	35.3	50.0	11.9	9.9	7.5	470.2
13-25 weeks (*b*)	138.1	100.0	92.9	36.1	46.0	10.4	5.5	7.3	436.3
26-38 weeks (*b*)	151.7	103.6	101.4	46.4	49.7	11.4	9.9	7.4	481.5
39-51 weeks (*b*)	88.5	72.0	56.6	22.4	26.1	5.8	4.6	4.1	280.0
Total less than 1 year (*b*)	523.6	381.8	355.0	140.1	171.8	39.4	30.0	26.3	1,668.0
1-4 years	1,148.1	804.5	518.5	237.5	282.5	85.1	32.0	48.2	3,156.2
5-9 years	623.9	582.4	290.3	186.4	181.6	65.6	12.0	40.9	1,983.1
10-14 years	473.5	361.2	167.6	124.3	111.4	40.4	6.0	19.0	1,303.5
15-19 years	367.9	313.9	123.1	121.5	73.9	30.9	2.9	10.0	1,044.2
20-24 years	274.1	191.2	82.4	68.2	42.8	20.4	1.2	6.3	686.4
25 years or more	440.4	290.3	160.2	103.1	67.4	34.5	*	2.4	1,098.7
Total (b)	**3,851.6**	**2,925.2**	**1,697.0**	**981.1**	**931.3**	**316.4**	**84.6**	**153.0**	**10,940.2**

(*a*) Non-institutionalised civilians with usual residence in Australia at 30 June 1981 and 30 June 1982. (*b*) Excludes 157,100 persons with a usual residence at 30 June 1982 but with no usual residence in Australia at 30 June 1981.

Asterisk (*) denotes figure subject to sampling variability too high for most practical uses.

Interstate migration

The most reliable data on internal and interstate migration are provided by the five-yearly censuses. The 1971 Census was the first census which set out to measure internal migration by asking respondents where they usually lived and where they had lived five years before. An analysis of the data is given in the Census Monograph *Internal Migration in Australia*. In the 1976 and 1981 Censuses, respondents were asked where they had lived one year, as well as five years, before. A summary of the 1976 results is given in Year Book No. 65 and the 1981 results in Year Book No. 67.

VITAL STATISTICS

Registration of vital events, i.e. births, deaths and marriages, has been compulsory throughout Australia since 1856. The total number of these occurrences is available for each year since the 1860s and more detailed information since the 1910s. The number of divorces has been published since 1891, but other details have been published on a consistent basis only since the 1950s.

Crude rates are the number of vital events per thousand of the mean population of a particular year. *Natural increase* is the excess of births over deaths. In 1982, births numbered 239,903, deaths 114,771 and the natural increase was 125,132. The rate of natural increase for 1982 was 8.2 per thousand of the mean resident population made up of crude birth rate 15.8 and crude death rate 7.6.

BIRTHS, DEATHS AND NATURAL INCREASE

	Number			*Crude rates per 1,000 of mean population*		
Period	*Births*	*Deaths*	*Natural increase*	*Births*	*Deaths*	*Natural increase*
Annual averages—						
1961–65	232,952	95,465	137,487	21.3	8.7	12.6
1966–70	240,325	107,263	133,062	20.0	8.9	11.1
1971–75	253,438	111,217	142,221	18.8	8.3	10.6
1976–80	225,388	109,028	116,360	15.7	7.6	8.1
Annual totals—						
1977	226,291	108,790	117,501	15.9	7.7	8.3
1978	224,181	108,425	115,756	15.6	7.5	8.1
1979	223,129	106,568	116,561	15.4	7.3	8.0
1980	225,527	108,695	116,832	15.3	7.4	8.0
1981	235,842	109,003	126,839	15.8	7.3	8.5
1982	239,903	114,771	125,132	15.8	7.6	8.2

There were 117,275 marriages registered in 1982 and the crude marriage rate rose to 7.7. Divorces numbered 44,088 and the crude divorce rate rose to 2.9.

MARRIAGE AND DIVORCE

	Number		*Crude rates per 1,000 of mean population*	
Period	*Marriages*	*Divorces*	*Marriage*	*Divorce*
Annual averages—				
1961–65	83,250	7,568	7.6	0.7
1966–70	106,188	10,681	8.8	0.9
1971–75	111,803	17,348	8.3	1.3
1976–80	106,297	45,220	7.4	3.2
Annual totals—				
1977	104,918	45,150	7.4	3.2
1978	102,958	40,608	7.2	2.8
1979	104,396	37,854	7.2	2.6
1980	109,240	39,258	7.4	2.7
1981	113,905	41,412	7.6	2.8
1982	117,275	44,088	7.7	2.9

Births and fertility

Special interest attaches to fertility as an element of population change. Fertility has had considerable impact on the population structure. In 1971, there was a record 276,362 births registered but the number of births declined progressively in each year until 1980, when a slight reversal of the trend occurred. This continued in 1981 when 235,842 births were registered, representing a 4.6 per cent increase from 1980. There were 239,903 births registered in 1982, 1.7 per cent more than in 1981.

Live births

Extensive statistics of live births are available since the 1910s. These include information about sex of children, the incidence of multiple births, marital status of the parents, the number of previous issue to the mother's existing marriage, the duration of marriage, the age of parents and their country of birth.

With rare exceptions, statistics indicate an excess of male over female births. In 1982, there were 123,254 male births and 116,649 female births, a masculinity ratio of 105.7.

The proportion of children born to parents not married to each other at the time of birth has been increasing. In 1961–65, 5.9 per cent of births were ex-nuptial. There were 32,958 ex-nuptial births registered in 1982, 13.7 per cent of the total.

LIVE BIRTHS: SEX AND NUPTIALITY

Period	Live births				Ex-nuptial live births		
	Males	Females	Persons	Masculinity ratio	Persons	Masculinity ratio	Percentage of total
Annual averages—							
1961–65	119,777	113,175	232,952	105.8	13,798	106.9	5.9
1966–70	123,326	116,999	240,325	105.4	18,937	105.1	7.9
1971–75	130,047	123,389	253,436	105.4	24,516	106.7	9.7
1976–80	115,783	109,605	225,388	105.6	25,062	106.3	11.1
Annual totals—							
1977	116,551	109,740	226,291	106.2	23,314	106.0	10.3
1978	114,964	109,217	224,181	105.3	24,744	106.7	11.0
1979	114,613	108,516	223,129	105.6	26,110	103.9	11.7
1980	115,948	109,579	225,527	105.8	28,076	106.8	12.4
1981	121,170	114,672	235,842	105.7	31,200	107.5	13.2
1982	123,254	116,649	239,903	105.7	32,958	105.9	13.7

About 1 per cent of confinements result in twin births and about one in 10,000 in triplets. Quadruplets occur about once in 250,000 confinements. The likelihood of multiple confinement is about 0.9 per cent for the first nuptial confinement, rising to about 1 per cent at the second confinement and to as much as 1.5 per cent at the fourth and subsequent confinements. The incidence of multiple births also rises with age of mother.

Since the 1950s, there has been a decline in the proportion, and since 1971 in the number, of women having three or more children to their marriage. During the 1950s and early 1960s the median age of mother at first nuptial birth declined, but in recent years it has risen. In 1982, median age at first birth was 25.5 years.

NUPTIAL CONFINEMENTS: BIRTH ORDER

Period	Birth order							Total nuptial (a)	Total ex-nuptial	Total confinements
	1	2	3	4	5	6	7 and over			
NUMBER OF CONFINEMENTS										
Annual averages—										
1961–65	69,281	57,971	40,818	23,612	12,125	6,160	6,862	216,829	13,655	230,483
1966–70	80,999	62,930	37,446	18,899	8,961	4,489	5,213	218,937	18,707	237,644
1971–75	88,120	74,641	36,914	15,216	6,006	2,805	2,959	226,674	24,299	250,973
1976–80	77,877	69,291	34,288	11,119	3,332	1,278	1,173	198,373	24,851	223,224
Annual totals—										
1977	78,588	70,859	34,596	11,032	3,438	1,349	1,263	201,135	23,134	224,269
1978	76,999	68,759	34,783	11,248	3,307	1,224	1,134	197,461	24,538	221,999
1979	77,032	67,250	34,387	11,100	3,124	1,140	1,050	195,084	25,884	220,968
1980	78,680	66,247	34,167	11,084	3,207	1,179	884	195,492	27,826	223,318
1981	82,476	67,627	35,445	11,750	3,282	1,113	886	202,579	30,956	233,535
1982	83,300	69,963	34,670	11,631	3,193	1,162	854	204,775	32,679	237,454
MEDIAN AGE OF MOTHER										
Annual averages—										
1961–65	23.1	25.7	28.3	30.6	32.5	33.9	35.0	26.5	22.5	26.4
1966–70	23.1	25.6	28.2	30.5	32.5	34.1	35.4	25.9	21.4	25.7
1971–75	23.6	26.0	28.2	30.6	32.5	34.1	36.8	25.9	21.1	25.6
1976–80	24.8	26.6	28.8	30.6	32.5	34.2	37.3	26.6	21.6	26.3
Annual totals—										
1977	24.6	26.4	28.6	30.5	32.4	34.5	37.1	26.5	21.5	26.1
1978	24.9	26.6	28.7	30.5	32.5	34.0	38.0	26.7	21.6	26.3
1979	25.1	26.8	28.9	30.7	32.4	34.2	36.8	26.9	21.6	26.5
1980	25.2	27.0	29.1	30.9	32.7	34.1	37.2	27.0	21.9	26.6
1981	25.3	27.2	29.2	30.9	32.6	34.4	36.9	27.1	22.1	26.7
1982	25.5	27.4	29.4	31.1	32.9	34.5	36.8	27.3	22.2	26.8

(a) Includes those for whom birth order was not stated.

Fertility

The general fertility rate, which is the number of births to women of any age per thousand females aged 15–44, is the simplest measure of fertility. The rates have been calculated for the three years' births around each census from 1881 and provide a consistent series for nuptial and ex-nuptial fertility as well as for total fertility.

The rates show a substantial decline in fertility over the total period with a low point in 1932–34 and a minor recovery, peaking in 1960–62. By 1980–82, however, the rates had again declined, this time to the lowest level recorded during the past 100 years. The 1980–82 general rate of 69 births per thousand females aged 15–44 was only 41 per cent of the rate in 1880–82.

FERTILITY RATES: AUSTRALIA

Period	Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years	Ex-nuptial births per 1,000 single, widowed or divorced women aged 15–44 years	*Index numbers (base year 1900–02=100)*		
				Births per 1,000 women aged 15–44 years	Nuptial births per 1,000 married women aged 15–44 years	Ex-nuptial births per 1,000 single, widowed or divorced women
1880–82	170	321	14	145	137	108
1890–92	159	332	16	136	141	123
1900–02	117	235	13	100	100	100
1910–12	117	236	13	100	100	100
1920–22	107	197	11	91	84	85
1932–34	71	131	7	61	56	54
1946–48	104	160	11	89	68	85
1953–55	109	149	14	93	63	108
1960–62	112	154	18	96	66	138
1965–67	95	132	21	81	56	162
1970–72(*a*)	97	n.a.	n.a.	83	n.a.	n.a.
1975–77(*a*)	76	n.a.	n.a.	65	n.a.	n.a.
1980–82(*a*)	69	n.a.	n.a.	59	n.a.	n.a.

(*a*) Estimated resident populations for census dates, cross-classified by marital status, are currently being calculated and will be available shortly.

Age specific birth rates provide a measure of changing patterns of fertility within the fertile ages. The sum of these rates *is the total fertility rate*. The total fertility rate represents the number of children a woman would bear in her lifetime if she experienced the rates of the year shown.

The total fertility rate was declining until 1980 but rose again in 1981 and has remained stable in 1982.

The birth rate for the most fertile age group of mothers (25-29) fell from 145.2 per 1,000 of population in 1981 to 145.0 in 1982. The birth rate in this group has been as high as 200 per thousand in the late 1950's and early 1960's.

AGE-SPECIFIC BIRTH RATES(*a*)

Period	*Age group (years)*							Total fertility (*b*)
	15–19	20–24	25–29	30–34	35–39	40–44	45–49	
1961–65	46.5	204.0	207.1	122.4	59.2	17.5	1.2	3.289
1966–70	49.4	172.6	187.6	103.0	46.8	12.9	1.0	2.866
1971–75	48.0	154.0	166.9	85.0	33.7	8.5	0.6	2.484
1976–80	30.7	116.4	143.8	73.8	23.7	4.8	0.3	1.968
1977*r*	32.1	122.0	145.7	74.1	23.9	5.0	0.3	2.016
1978*r*	29.9	115.8	144.0	73.4	23.5	4.5	0.2	1.957
1979*r*	28.5	109.1	142.5	73.9	23.6	4.6	0.3	1.913
1980*r*	27.6	107.0	141.0	75.1	23.7	4.4	0.3	1.895
1981*r*	28.2	107.4	145.2	77.6	24.5	4.5	0.3	1.938
1982	27.4	103.9	145.0	80.6	25.6	4.5	0.3	1.937

(*a*) Number of births per 1,000 women in each age group. Excludes particulars of full-blood Aboriginals before 1966. Rates from 1971 have been revised using estimated resident population introduced after the 1981 Census. (*b*) The sum of the age specific rates multiplied by 5 and divided by 1,000. This is the number of children a woman would bear in her lifetime if she experienced the rates of the year shown.

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who fail to survive to the end of the childbearing period. *The net reproduction rate* allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

GROSS AND NET REPRODUCTION RATES

Period	*Gross reproduction rate*	*Net reproduction rate*	*Life tables used*
1961(*a*)	1.728	1.672	1960–62
1966	1.401	1.357	1965–67
1971	1.403	1.362	1971
1976	1.004	0.981	1976
1979	0.930	0.911	1979
1980	0.921	0.903	1980
1981	0.942	0.925	1981
1982	0.942	0.924	1982

(*a*) Excludes particulars of full-blood Aboriginals.

Mortality

The number of deaths per year is in excess of 100,000. The increase from previous decades arises from the overall growth of the population, and from the advanced age of an increasing proportion of the population. The crude death rate, which fell from over 12 per 1,000 at the beginning of the century to 7.6 per 1,000 in 1982, can be expected to rise slowly as a result of further ageing of the population, unless there is a more than off-setting drop in age specific death rates.

General mortality

Between 1953–55 and 1960–62 mortality declined in every age-group. Between 1960–62 and 1970–72 there were further declines in most age groups, particularly among infants. However, increases in mortality were recorded for males aged 15–24 years. Since 1970–72, there have been further decreases in mortality at most ages.

Mortality is greater for males than for females at every age. It is relatively high in the first year of life (11.6 per 1,000 males and 9.1 per 1,000 females in 1982), very low in childhood and young adulthood, and then rises in middle and old age.

AGE-SPECIFIC DEATH RATES(*a*)

Age group (years)	*1956–60 (b)*	*1961–65 (b)*	*1966–70 (b)*	*1971–75 (b)*	*1976–80 (b)*	*1980*	*1981*	*1982*
				MALES				
Under 1 (*c*)	23.3	21.7	20.4	18.2	13.5	11.9	11.2	11.6
1–4	1.3	1.1	1.0	0.9	0.7	0.7	0.6	0.7
5–9	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.4
10–14	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4
15–19	1.4	1.2	1.4	1.5	1.4	1.3	1.2	1.3
20–24	1.8	1.7	1.8	1.7	1.7	1.6	1.5	1.6
25–29	1.5	1.5	1.5	1.3	1.4	1.4	1.3	1.4
30–34	1.8	1.7	1.6	1.4	1.3	1.2	1.2	1.3
35–39	2.3	2.4	2.4	2.1	1.9	1.7	1.7	1.6
40–44	3.5	3.7	3.8	3.4	3.0	2.8	2.6	2.5
45–49	5.9	6.2	6.2	6.0	5.2	4.9	4.5	4.5
50–54	10.0	10.3	10.4	9.6	8.6	8.3	7.9	7.5
55–59	16.9	16.8	17.2	15.9	13.8	13.0	13.0	12.7
60–64	26.6	27.4	27.8	25.5	22.2	20.9	19.8	20.0
65–69	42.0	42.2	44.3	39.3	35.3	33.5	32.3	33.1
70–74	63.5	64.7	67.0	61.2	54.2	52.1	52.0	52.0
75–79	97.5	97.2	102.7	95.3	84.7	82.0	79.8	82.8
80–84	145.0	145.0	149.2	141.2	127.9	122.6	120.2	124.8
85 and over	251.2	243.7	245.9	231.7	210.7	203.3	206.8	217.1
				FEMALES				
Under 1 (*c*)	18.7	17.0	15.7	14.0	10.7	9.4	8.7	9.1
1–4	1.1	0.9	0.8	0.7	0.5	0.5	0.5	0.5
5–9	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2
10–14	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2
15–19	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4
20–24	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
25–29	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5
30–34	1.0	1.0	0.9	0.8	0.7	0.7	0.6	0.5
35–39	1.6	1.5	1.5	1.3	1.0	0.9	0.9	0.8
40–44	2.4	2.3	2.3	2.1	1.8	1.6	1.4	1.5
45–49	3.9	3.7	3.7	3.5	2.8	2.5	2.7	2.5
50–54	5.7	5.6	5.9	5.2	4.5	4.1	3.8	4.2
55–59	8.7	8.3	8.7	8.0	6.8	6.4	6.2	6.3
60–64	13.8	13.6	13.6	12.2	10.8	9.8	9.7	10.1
65–69	23.0	21.7	22.1	19.4	16.9	15.9	15.7	16.0
70–74	38.8	37.4	37.3	33.1	27.9	26.3	25.5	25.7
75–79	63.9	63.3	63.6	57.3	48.4	45.6	44.3	45.3
80–84	113.5	107.5	105.9	97.4	84.0	79.8	75.9	79.7
85 and over	215.6	205.1	201.0	187.9	168.4	163.7	160.9	171.2

(*a*) Number of deaths per 1,000 of population of the same age group and sex. (*b*) Average annual rate per 1,000 of population.
(*c*) Infant deaths per 1,000 live births.

AGE AT DEATH, 1982

	Number			*Per cent*		
Age at death (years)	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Under 1	1,425	1,057	2,482	2.3	2.1	2.2
1–4	313	226	539	0.5	0.4	0.5
5–9	223	108	331	0.4	0.2	0.3
10–14	263	121	384	0.4	0.2	0.3
15–19	827	263	1,090	1.3	0.5	0.9
20–24	1,084	306	1,390	1.7	0.6	1.2
25–29	893	330	1,223	1.4	0.6	1.1
30–34	812	327	1,139	1.3	0.6	1.0
35–39	859	439	1,298	1.4	0.9	1.1
40–44	1,090	629	1,719	1.7	1.2	1.5
45–49	1,728	910	2,638	2.7	1.8	2.3
50–54	2,954	1,583	4,537	4.7	3.1	4.0
55–59	4,742	2,320	7,062	7.5	4.5	6.2
60–64	6,069	3,340	9,409	9.6	6.5	8.2
65–69	8,338	4,646	12,984	13.2	9.0	11.3
70–74	9,531	6,038	15,569	15.1	11.7	13.6
75–79	9,162	7,265	16,427	14.5	14.1	14.3
80–84	6,823	8,325	15,148	10.8	16.2	13.2
85–89	3,891	7,359	11,250	6.1	14.3	9.8
90–94	1,804	4,397	6,201	2.8	8.5	5.4
95–99	415	1,291	1,706	0.7	2.5	1.5
100 and over	35	196	231	0.1	0.4	0.2
Not stated	14	—	14	—	—	—
Total	**63,295**	**51,476**	**114,771**	**100.00**	**100.00**	**100.00**

Life expectancy

The life table is a life history of a hypothetical group, or cohort, of people, as it is diminished gradually by deaths. They form the basis for the *stationary population* which is the population that would result from a constant number of births each year which had been subject at each age to the life table mortality rates.

Since 1921, official life tables have been calculated from the separate male and female populations as enumerated at the census, and the deaths of the three years around the census. Earlier life tables were compiled for decennial periods 1881–90, 1891–1900 and 1901–10. Life tables have also been prepared in recent years using annual age estimates and the deaths of a particular year.

A key value in life tables is the expectation of life remaining at each age. Expectation of life, particularly at birth, improved at every age in the first half of this century. Between 1953–55 and 1970–72 there was little change in expectation of life. However, since 1970–72 there have been significant improvements, particularly in expectation of life at birth which has increased between 1970–72 and 1982 from 68.1 years to 71.2 for males and from 74.8 years to 78.2 for females.

COMPLETE EXPECTATION OF LIFE AT SELECTED AGES

	Expectation of life (a) at									
	Birth		*1 year of age*		*20 years of age*		*40 years of age*		*60 years of age*	
Period	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*
1901–10 (*b*)(*c*)	55.2	58.8	60.0	62.9	44.7	47.5	28.6	31.5	14.4	16.2
1920–22 (*b*)(*c*)	59.2	63.3	62.7	66.0	47.0	50.0	30.1	33.1	15.1	17.2
1932–34 (*b*)(*c*)	63.5	67.1	65.5	68.7	48.8	51.7	31.1	34.0	15.6	17.7
1946–48 (*b*)(*c*)	66.1	70.6	67.3	71.5	49.6	53.5	31.2	34.9	15.4	18.1
1953–55 (*b*)(*c*)	67.1	72.8	67.9	73.5	50.1	55.1	31.7	36.0	15.5	18.8
1960–62 (*b*)(*c*)	67.9	74.2	68.5	74.5	50.4	56.2	31.8	37.0	15.6	19.5
1965–67 (*c*)	67.6	74.2	68.1	74.4	50.0	56.0	31.4	36.9	15.3	19.5
1970–72 (*c*)	68.1	74.8	68.5	74.9	50.4	56.5	31.8	37.3	15.5	19.9
1975–77 (*c*)	69.6	76.6	69.6	76.5	51.5	58.0	32.8	38.7	16.4	21.0
1978 (*d*)	70.3	77.3	70.3	77.2	52.1	58.6	33.4	39.3	16.8	21.5
1979(*d*)	70.9	77.9	70.8	77.7	52.5	59.1	33.8	39.8	17.1	21.9
1980(*d*)	71.0	78.1	70.8	77.8	52.6	59.3	33.9	39.9	17.1	21.9
1981 (*d*)	71.4	78.4	71.2	78.1	52.9	59.5	34.1	40.1	17.3	22.1
1982(*d*)	71.2	78.2	71.1	77.9	52.8	59.3	34.1	39.9	17.1	21.9

(*a*) The average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime. (*b*) Excludes particulars of full-blood Aboriginals prior to 1965–67. (*c*) Based on Official Life Tables calculated by the Australian Government Actuary. (*d*) Based on annual life tables calculated by the Australian Statistician. These tables are based on estimated resident populations.

Marriages

Marriages in Australia are solemnised under Federal legislation, namely the *Marriage Act* 1961 as amended. The original Act, which superseded State Acts, came into part operation on 6 May 1961. The first regulations and major provisions under the Act commenced on 1 September 1963.

Under the Act, marriages may be celebrated by Ministers of Religion registered as Authorised Celebrants, Registrars or other persons whose function is the registration of marriages, and other authorised civil and religious celebrants.

One month's written notice of intended marriage must be given to the Celebrant, though this may be shortened in special circumstances. Celebrants issue marriage certificates to the parties and transmit copies of the certificates to Registrars in the States or Territories in which the marriages took place.

The marriageable age under the Act is 18 for males and 16 for females. After inquiry, a Judge or Magistrate may authorise, in exceptional and unusual circumstances, the marriage of a person below marriageable age, but not below 16 for males and 14 for females.

Minors require, generally speaking, parental consent. A prescribed authority, usually a Registrar, may dispense with consent where such consent can be presumed and it would be unreasonable to require it. If parental consent is refused unreasonably, a Magistrate may give consent in lieu of the parent or guardian. Such a Magistrate's decision is subject to appeal. The age of majority was reduced in 1973 from 21 to 18. Because the marriageable age for males is also 18, the only persons of marriageable age requiring parental consent are now females between the ages of 16 and 18.

The Act makes provision, on a uniform basis, in respect of prohibited relations, other grounds for void marriages, legitimation, marriages overseas, and pre-marital education.

In 1982, 76.6 per cent of grooms and 77.5 per cent of brides were marrying for the first time; approximately 2.6 per cent were widowers and 3.1 per cent widows; and 20.8 per cent of grooms and 19.5 per cent of brides had been divorced. The proportion of marriages involving divorced persons increased sharply in 1976 and slightly thereafter. This is associated with the larger numbers of divorces granted since the introduction of the *Family Law Act* 1975.

Median age at first marriage declined during the 1950s and 1960s but has risen slightly in recent years. In 1982 it was 24.6 years for males and 22.4 for females. In 1982, 2.8 per cent of grooms and 14.5 per cent of brides married under the age of 20.

MARITAL STATUS AT MARRIAGE

	Grooms				*Brides*			
Period	*Never married*	*Widowed*	*Divorced*	*Total bride-grooms*	*Never married*	*Widowed*	*Divorced*	*Total brides*
				NUMBER				
Annual averages—								
1961–65	75,384	3,063	4,803	83,250	74,962	3,218	5,070	83,250
1966–70	96,438	3,320	6,430	106,188	96,341	3,568	6,279	106,188
1971–75	99,203	3,473	9,126	111,802	99,287	3,810	8,705	111,802
1976–80	82,344	3,394	20,559	106,297	82,987	4,022	19,288	106,297
Annual totals—								
1977	81,172	3,385	20,361	104,918	81,694	3,999	19,225	104,918
1978	79,581	3,279	20,098	102,958	80,142	3,818	18,998	102,958
1979	80,226	3,266	20,904	104,396	80,893	3,996	19,507	104,396
1980	83,950	3,264	22,026	109,240	84,770	3,920	20,550	109,240
1981	87,460	3,152	23,293	113,905	88,308	3,727	21,870	113,905
1982	89,858	2,988	24,429	117,275	90,844	3,579	22,852	117,275
				MEDIAN AGES				
Annual averages—								
1961–65	24.2	56.6	40.4	24.7	21.3	49.2	36.6	21.7
1966–70	23.5	56.7	39.8	23.9	21.2	50.1	36.1	21.5
1971–75	23.3	57.8	37.3	23.9	21.0	51.1	33.0	21.4
1976–80	23.9	58.4	36.1	25.4	21.6	51.6	32.5	22.7
Annual totals—								
1977	23.8	58.4	35.9	25.2	21.4	50.9	32.2	22.5
1978	23.9	58.5	35.9	25.4	21.6	51.8	32.4	22.7
1979	24.1	58.6	36.1	25.6	21.7	52.3	32.6	22.9
1980	24.2	58.6	35.8	25.7	21.9	52.0	32.8	23.0
1981	24.4	59.1	36.0	25.9	22.1	52.1	32.9	23.3
1982	24.6	59.4	36.1	26.1	22.4	51.5	33.1	23.6

AGE AT MARRIAGE

Period	*Age* *Under 20*	*20–24*	*25–29*	*30–34*	*35–39*	*40–44*	*45–49*	*50 and over*	*Total*
GROOM									
Annual averages—									
1961–65	5,278	38,845	20,344	7,495	3,799	2,154	1,498	3,837	83,250
1966–70	7,917	55,824	23,398	7,008	3,544	2,473	1,763	4,258	106,185
1971–75	8,427	59,058	24,374	7,408	3,425	2,376	1,970	4,765	111,802
1976–80	4,830	45,796	26,139	11,245	5,500	3,512	2,822	6,452	106,297
Annual totals—									
1977	5,242	46,059	24,908	10,750	5,216	3,399	2,915	6,429	104,918
1978	4,592	44,011	25,337	11,229	5,451	3,447	2,691	6,200	102,958
1979	4,069	43,778	26,537	11,687	5,706	3,576	2,710	6,333	104,396
1980	3,943	45,519	28,256	12,785	5,928	3,690	2,737	6,382	109,240
1981	3,619	46,114	30,522	13,674	6,800	3,958	2,686	6,532	113,905
1982	3,288	45,811	32,336	14,751	7,605	4,347	2,823	6,314	117,275
BRIDE									
Annual averages—									
1961–65	23,454	39,370	8,760	3,553	2,416	1,715	1,367	2,616	83,250
1966–70	30,475	53,356	10,334	3,521	2,143	1,764	1,545	3,047	106,185
1971–75	34,319	51,846	12,363	4,280	2,279	1,733	1,621	3,362	111,802
1976–80	23,006	45,938	16,560	7,700	4,092	2,669	2,124	4,208	106,297
Annual totals—									
1977	24,827	44,208	15,692	7,360	3,945	2,519	2,229	4,138	104,918
1978	22,290	44,094	16,114	7,810	4,026	2,525	2,121	3,978	102,958
1979	20,382	46,029	16,974	7,873	4,225	2,803	1,950	4,160	104,396
1980	19,466	49,467	18,267	8,591	4,370	2,858	1,965	4,256	109,240
1981	18,769	51,769	20,039	9,354	4,871	3,053	1,992	4,058	113,905
1982	17,045	53,267	22,292	10,031	5,510	3,150	2,117	3,863	117,275

Marriage rates of the marriageable population provide a measure of changing marriage patterns. Marriage rates have been calculated for the three years around the census per thousand single, widowed and divorced males, females and persons aged 15 years and over.

The rates for 1980–82 were 57.3 for males, 54.0 for females, and 55.6 for persons.

The proportion of all marriages celebrated by civil officers rose to 38.7 per cent of all marriages registered in 1982.

Divorce

The *Matrimonial Causes Act* 1959–66 provided for dissolution of marriage on one or more of 14 grounds. It also provided for nullity of marriage and for judicial separation. This Act, which came into operation in 1961, replaced separate State and Territory legislation. The *Family Law Act* 1975, which came into operation on 5 January 1976, provides for a single ground for divorce—irretrievable breakdown of marriage—and for nullity of marriage on the ground that the marriage is void.

Statistics prior to 1976 in the following tables relate to divorces granted under the Matrimonial Causes Act or under previous State or Territory legislation.

When comparing the number and rate of decrees granted from year to year it should be borne in mind that the availability of judges to hear petitions lodged can affect the number of decrees granted. A rise in one year may be due wholly or in part to the clearing of a backlog of cases from an earlier year. In addition, changes to legislation, rules or practices may also affect the number of divorce applications.

Following a sharp rise in the number of divorces in 1976, the first year of Family Law legislation, the number dropped by 29 per cent to 45,150 in 1977. However, this number was still 86 per cent higher than the number granted in 1975 under Matrimonial Causes legislation.

DIVORCES

Period	Petitions filed	Petitions granted
Annual averages—		
1961–65	9,955	7,568
1966–70	13,089	10,681
1971–75	22,704	17,348
1976–80r	45,503	45,220
Annual totals—		
1977	41,628	45,150
1978	40,918	40,608
1979	37,393	37,854
1980r	41,482	39,258
1981r	43,520	41,412
1982	43,055	44,088

NUMBER OF DIVORCES, 1970 TO 1982

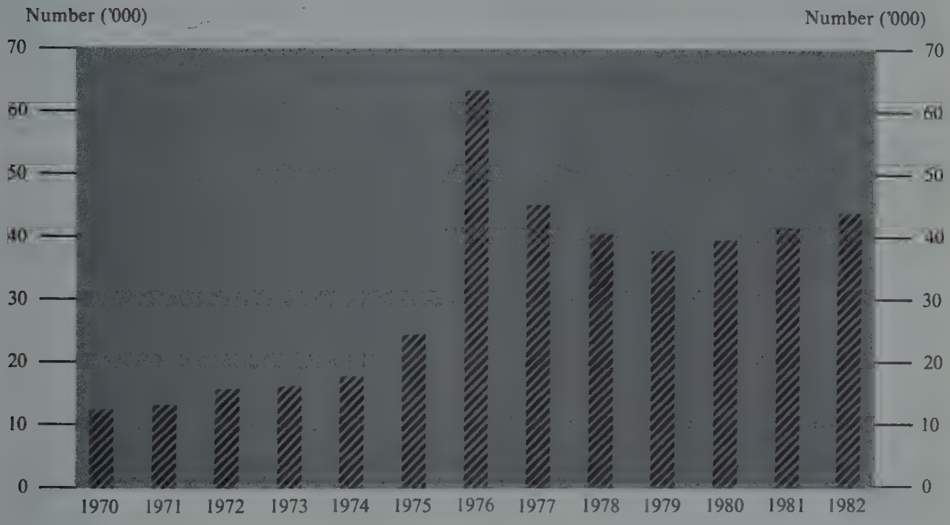


PLATE 29

Duration of marriage, age at marriage and age at divorce

The median duration of marriages dissolved in 1982 was 10.4 years. Of the 44,088 marriages which were dissolved, 48.3 per cent had lasted less than ten years, 33.0 per cent between ten and twenty years and 18.8 per cent twenty years or more.

DIVORCE, YEARS MARRIED

Period	Years married							Median duration of marriage
	0–4	5–9	10–14	15–19	20–24	25 and over	Total	
Annual averages—								
1961–65	501	1,999	1,747	1,329	926	1,040	7,542	13.6
1966–70	903	2,937	2,146	1,685	1,429	1,581	10,681	13.4
1971–75	1,693	5,478	3,432	2,398	1,930	2,417	17,349	11.9
1976–80	8,234	13,112	8,359	5,556	4,265	5,694	45,220	10.6
Annual totals—								
1977	7,802	12,960	8,383	5,630	4,374	6,001	45,150	10.9
1978	7,839	11,599	7,504	4,941	3,755	4,970	40,608	10.5
1979	7,621	10,754	6,929	4,646	3,502	4,402	37,854	10.3
1980	8,115	11,138	7,558	4,644	3,496	4,306	39,258	10.2
1981	8,606	11,800	8,118	4,941	3,550	4,397	41,412	10.2
1982	8,952	12,323	8,792	5,744	3,819	4,456	44,088	10.4

In 1982, the median age at marriage of divorcing husbands was 23.6 years and of wives 21.0 years. Of husbands, 9.8 per cent had been aged under 20 at marriage and 52.9 per cent aged 20–24; of wives 36.0 per cent had been aged under 20 and 44.2 per cent between 20–24.

DIVORCE, MEDIAN AGE AT MARRIAGE

Period	Median age at marriage of—	
	Husband	Wife
Annual averages—		
1966–70	24.2	21.7
1971–75	23.5	20.9
1976–80	23.4	20.8
Annual		
1977	23.3	20.7
1978	23.3	20.8
1979	23.4	20.8
1980	23.4	20.9
1981	23.5	20.9
1982	23.6	21.0

At time of divorce, the median age of husbands was 35.8 years and of wives 33.2 years. A total of 23.9 per cent of husbands and 35.9 per cent of wives were aged under 30 years when the marriage was dissolved.

Children of the marriage

DISSOLUTION OF MARRIAGE, NUMBER OF CHILDREN

Period	Number of children of the marriage						Total dissolutions	Total children	Average number of children
	0	1	2	3	4	5 and over			
Annual averages—									
1961–65	2,834	1,950	1,611	753	279	143	7,568	9,347	1.2
1966–70	3,628	2,656	2,428	1,212	497	261	10,681	14,588	1.4
1971–75	5,628	4,062	4,200	2,147	874	438	17,349	24,840	1.4
1976–80	17,013	10,186	10,970	4,746	1,633	671	45,220	55,218	1.2
Annual totals—									
1977	16,381	10,473	11,005	4,857	1,679	755	45,150	57,878	1.3
1978	14,965	9,127	10,047	4,336	1,530	603	40,608	51,599	1.3
1979	14,641	8,167	9,488	3,876	1,243	439	37,854	46,130	1.2
1980	15,471	8,412	9,890	3,900	1,173	412	39,258	46,836	1.2
1981	16,127	8,898	10,621	4,141	1,231	394	41,412	49,616	1.2
1982	16,931	9,501	11,544	4,556	1,179	377	44,088	53,010	1.2

For the years in which the Matrimonial Causes Act was in force, children of the marriage were defined as living children under the age of 21 at the time of the petition. Under previous legislation there were differences between States. The Family Law Act defines them as children of the marriage if they were under the age of 18 at the time of application. In 1982, of the dissolutions granted under the Family Law Act, no children were involved in 38.4 per cent of the dissolutions, while 21.6 per cent of the dissolutions involved 1 child, 26.2 per cent 2 children, and 13.9 per cent 3 or more children.

INTERNATIONAL MOVEMENTS

Statistics of overseas arrivals and departures are compiled from incoming and outgoing passenger cards which are collected from all travellers under the *Migration Act* 1958. Earlier statistics were obtained from passenger lists required under various Acts.

Since 1924, overseas travellers have been classified into two principal categories which distinguish movements for short terms from movements for longer periods (including permanent movements). Revised questions for travellers were introduced in 1958 and again in 1974. The 1958 revision enabled the separation, after 1959, of permanent from other long-term movements and also the identification of former settlers departing permanently. The 1974 revisions improved the classification without change of principle. The categories of overseas movement are:

Permanent—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents (including former settlers) departing with the stated intention of residing permanently abroad. Before 1974, former settlers were not so classified unless they had spent at least 12 months in Australia.

Long-term—consists of overseas visitor arrivals and departures of Australian residents with the stated intention of staying in Australia or abroad respectively for 12 months or more; and departures of visitors and return of residents who have stayed in Australia or abroad respectively for 12 months or more. Until 1974, Australian residents returning were classified as long-term only if their time spent abroad included a period of 12 months in any one country. Their classification is now governed solely by their total absence from Australia.

Short-term—consists of overseas visitor arrivals and departures of Australian residents whose intended or actual period of stay in Australia or abroad respectively is less than twelve months.

The classification of overseas movements is based on statements made by the traveller on arrival in or departure from Australia. The statistics represent the travellers' intentions at the time of arrival or departure; travellers may subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

An upsurge of international tourism, particularly by Australian residents, occurred in the 1970s. The volume of sea travel has changed little over the period (the figures exclude pleasure cruises in the south west Pacific beginning and ending in Australia), so that in 1982 less than one half of one per cent of arrivals and departures had travelled by ship. Net gain, i.e. the excess of total arrivals over total departures, until recently provided a satisfactory measure of the population gain from international migration. In recent years, however, distortions arising from seasonality of short-term arrivals and departures have become very large. For the purpose of estimating the population of Australia and the States and Territories, therefore, the migration component of population growth has been measured since 1 July 1971 by reference to permanent and long-term movements only.

The total number of overseas arrivals and departures (excluding passengers on cruises which commence and complete their journeys in an Australian port) for the year 1982 was 4,710,200, 4 per cent more than for 1981.

New South Wales, with 55.3 per cent of clearances, remained the principal State of arrival and departure in 1981.

Short-term movements accounted for approximately 94 per cent of total movements in both 1981 and 1982.

Changes in the pattern and volume of short-term movements is shown in Chapter 26, under the heading 'Tourism'.

OVERSEAS ARRIVALS AND DEPARTURES: AUSTRALIA 1961–1982

ARRIVALS

	Permanent and long-term movement				Short-term movement(a)				
	Permanent	Long-term				Overseas visitors			
Period	Settlers arriving	Australian residents	Overseas visitors	Total permanent and long-term arrivals	Australian residents	In transit	Other	Total	Total arrivals
Annual averages									
1961-65 . . .	115,198	22,258	14,770	152,226	117,041	28,685	102,776	131,461	400,727
1966-70 . . .	160,813	36,148	24,481	221,442	259,700	41,476	255,800	297,275	778,417
1971-75 . . .	109,687	57,751	26,254	193,692	631,446	74,356	401,569	475,925	1,301,063
1976-80 . . .	73,823	59,143	28,730	161,695	1,062,105	62,521	622,208	684,729	1,908,530
Annual totals									
1977	75,640	57,700	27,472	160,813	973,677	53,032	510,249	563,281	1,697,771
1978	68,419	57,938	28,389	154,745	1,029,482	57,501	573,093	630,594	1,814,822
1979	72,236	61,441	33,450	167,127	1,144,334	68,339	725,006	793,345	2,104,807
1980	94,502	58,760	31,025	184,288	1,194,768	67,270	837,288	904,558	2,283,613
1981	118,735	59,402	34,552	212,689	1,181,387	62,772	873,955	936,727	2,330,803
1982	107,171	53,766	34,265	195,202	1,259,643	64,446	890,228	954,674	2,409,519

DEPARTURES

	Permanent and long-term movement						Short-term movement(a)		
	Permanent			Long-term					
Period	Former settlers departing	Other residents departing	Total permanent departures	Australian residents	Overseas visitors	Total permanent and long-term departures	Australian residents	Overseas visitors	Total departures
Annual averages									
1961-65 . . .	9,698	6,798	16,496	37,905	12,719	67,120	118,624	135,006	320,749
1966-70 . . .	23,191	8,752	31,942	56,219	14,349	102,511	258,824	308,321	669,656
1971-75 . . .	26,622	12,032	38,654	66,430	22,984	128,067	647,608	479,015	1,254,690
1976-80 . . .	13,827	9,917	23,744	59,223	19,837	102,803	1,077,331	655,413	1,835,548
Annual totals									
1977	14,171	8,591	22,762	64,091	19,182	106,035	971,253	540,943	1,618,230
1978	14,027	10,933	24,960	58,519	19,643	103,122	1,062,234	597,123	1,762,480
1979	12,670	10,750	23,420	54,266	20,422	98,107	1,175,768	752,440	2,026,317
1980	11,450	9,393	20,843	50,713	19,306	90,862	1,203,603	874,090	2,168,555
1981	11,280	8,576	19,856	46,738	19,018	85,612	1,217,299	900,376	2,203,287
1982	13,352	9,141	22,493	46,892	22,956	92,342	1,286,908	921,459	2,300,708

(*a*) Statistics of short-term movement since 1974 have been derived from a stratified sample of travellers and are subject to sampling error.

Migration to Australia

Migration to Australia is regulated by the *Migration Act* 1958 which came into force on 1 June 1959. Any person entering Australia after the commencement of the Act without having been granted an entry permit or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic and consular representatives of other countries, and seamen and air crew who enter with leave in Australian ports.

Immigration has contributed substantially to Australia's post-war population growth. In the post-war years, some 3.9 million migrants have arrived, of which it is estimated that more than 80 per cent settled.

Settler arrivals in 1982 totalled 107,171, a decrease of 9.7 per cent from the total for the previous year.

European born settlers continued to be the major source, contributing 54 per cent of the overall settler intake. This was primarily due to the large contribution from the U.K. and Ireland (32 per cent of the total). The number of Asian born settlers was 27,171 which constituted 25 per cent of settler arrivals. 40 per cent of these were included in the refugee program. New Zealand born settlers again constituted the second largest group, after the U.K. and Ireland, with 9,806 settlers, 9 per cent of the total.

The number of assisted arrivals in 1982 decreased by 9,754 to 20,204. From May 1981 the grant of assisted passage was restricted to refugees.

SETTLERS ARRIVING BY COUNTRY OF LAST RESIDENCE

	Number		*Per cent*	
	1972	*1982*	*1972*	*1982*
South Africa	1,666	3,347	1.5	3.1
Other Africa	3,177	1,776	2.8	1.7
Total Africa	*4,843*	*5,123*	*4.3*	*4.8*
Canada	2,348	1,443	2.1	1.3
U.S.A.	5,190	2,478	4.6	2.3
Other America	3,066	1,458	2.7	1.4
Total America	*10,604*	*5,379*	*9.4*	*5.0*
Bangladesh, India, Pakistan and Sri Lanka	3,600	1,546	3.2	1.4
Indonesia	60	2,161	0.1	2.0
Lebanon	2,674	801	2.4	0.7
Malaysia and Singapore	1,654	7,514	1.5	7.0
Philippines	458	3,649	0.4	3.4
Thailand	75	3,601	0.1	3.4
Turkey	1,575	501	1.4	0.5
Other Asia	3,455	5,319	3.1	5.0
Total Asia	*13,551*	*25,092*	*12.0*	*23.4*
U.K. and Ireland	50,630	34,710	45.0	32.4
Austria	2,037	4,838	1.8	4.5
Germany	2,361	5,421	2.1	5.1
Greece	4,093	734	3.6	0.7
Italy	4,415	875	3.9	0.8
Yugoslavia	5,147	1,882	4.6	1.8
Other Europe	9,790	9,972	8.7	9.3
Total Europe	*78,473*	*58,432*	*69.8*	*54.5*
New Zealand	3,796	11,073	3.4	10.3
Other Oceania	1,201	2,062	1.1	1.9
Total Oceania	*4,997*	*13,135*	*4.4*	*12.3*
Not Stated	..	*10*	..	..
Total	**112,468**	**107,171**	**100.0**	**100.0**

Each year Australia loses a proportion of its previous migrant intakes. Additionally, partly as a result of the high international mobility of professional and skilled workers, substantial numbers of Australians take up job opportunities overseas.

Eligibility for entry for settlement is restricted to certain family members and fiancees/fiances of Australian residents, to others who possess skills, qualifications, personal or other qualities which represent an economic, social or cultural gain to Australia, and to refugees.

SETTLER ARRIVALS

Period	*Assisted*	*Unassisted*	*Total*
Annual averages—			
1966–70	107,496	53,317	160,813
1971–75	58,176	51,511	109,687
1976–80	19,662	54,162	73,824
Annual totals—			
1977	17,532	58,108	75,640
1978	19,549	48,870	68,419
1979	19,063	53,173	72,236
1980	26,324	68,178	94,502
1981	29,958	88,777	118,735
1982	20,204	86,967	107,171

SETTLER ARRIVALS BY AGE

Period	Age in years						
	0–4	5–14	15–24	25–44	45–64	65 and over	All ages
MALES							
Annual averages—							
1966–70	10,542	15,434	21,184	32,272	5,809	1,243	86,484
1971–75	7,411	10,009	12,878	20,326	3,921	1,247	55,792
1976–80	4,942	7,154	7,707	12,669	2,971	1,385	36,828
Annual totals—							
1977	5,205	7,221	8,009	12,410	3,461	1,344	37,650
1978	4,577	6,768	7,463	11,351	2,897	1,378	34,434
1979	4,986	6,837	7,598	12,205	2,873	1,339	35,838
1980	5,947	9,403	10,126	17,822	3,517	1,680	48,495
1981	7,554	12,064	13,102	23,155	4,204	1,787	61,866
1982	6,980	10,955	10,003	21,864	3,788	1,781	55,371
FEMALES							
Annual averages—							
1966–70	9,909	14,435	17,751	24,132	6,240	1,861	74,328
1971–75	6,952	9,301	13,685	17,445	4,787	1,725	53,895
1976–80	4,639	6,392	8,105	12,168	3,885	1,808	36,996
Annual totals—							
1977	4,821	6,597	8,070	12,104	4,595	1,803	37,990
1978	4,062	5,651	7,578	11,202	3,738	1,754	33,985
1979	4,621	6,062	8,438	11,874	3,607	1,796	36,398
1980	5,591	8,334	9,904	15,828	4,204	2,147	46,008
1981	7,073	10,616	11,654	20,843	4,536	2,147	56,869
1982	6,379	9,426	9,799	19,946	4,195	2,055	51,800
PERSONS							
Annual averages—							
1966–70	20,451	29,869	38,935	56,405	12,049	3,104	160,813
1971–75	14,363	19,311	26,563	37,771	8,708	2,972	109,687
1976–80	9,581	13,546	15,812	24,837	6,855	3,192	73,824
Annual totals—							
1977	10,026	13,818	16,075	24,518	8,056	3,147	75,640
1978	8,639	12,419	15,041	22,553	6,635	3,132	68,419
1979	9,607	12,899	16,036	24,079	6,480	3,135	72,236
1980	11,538	17,737	20,030	33,650	7,721	3,827	94,502
1981	14,627	22,680	24,756	43,998	8,740	3,934	118,735
1982	13,359	20,381	19,802	41,810	7,983	3,836	107,171

SETTLER ARRIVALS BY MARITAL STATUS

Period	Never married		Married	Widowed and divorced	Total
	Under 15 years	15 years and over			
MALES					
Annual averages—					
1966–70	25,976	25,742	33,668	1,098	86,484
1971–75	17,420	14,750	22,595	1,027	55,792
1976–80	12,095	9,052	14,769	912	36,827
Annual totals—					
1977	12,426	9,631	14,826	767	37,650
1978	11,345	8,451	13,808	830	34,434
1979	11,817	8,453	14,562	1,006	35,838
1980	15,344	12,015	19,762	1,374	48,495
1981	19,601	15,155	25,641	1,469	61,866
1982	17,914	12,180	23,957	1,320	55,371

SETTLER ARRIVALS BY MARITAL STATUS—*continued*

Period	*Never married*		*Married*	*Widowed and divorced*	*Total*
	Under 15 years	*15 years and over*			
		FEMALES			
Annual averages—					
1966–70	24,344	12,530	34,125	3,330	74,328
1971–75	16,246	9,752	25,055	2,842	53,895
1976–80	11,005	6,435	17,043	2,513	36,996
Annual totals—					
1977	11,378	6,319	17,874	2,419	37,990
1978	9,700	5,955	15,950	2,380	33,985
1979	10,672	6,609	16,518	2,599	36,398
1980	13,914	7,818	20,987	3,289	46,008
1981	17,627	9,250	26,771	3,221	56,869
1982	15,747	7,940	25,294	2,819	51,800
		PERSONS			
Annual averages—					
1966–70	50,320	38,272	67,793	4,427	160,813
1971–75	33,666	24,502	47,651	3,869	109,687
1976–80	23,100	15,487	31,813	3,424	73,824
Annual totals—					
1977	23,804	15,950	32,700	3,186	75,640
1978	21,045	14,406	29,758	3,210	68,419
1979	22,489	15,062	31,080	3,605	72,236
1980	29,258	19,833	40,748	4,663	94,502
1981	37,228	24,405	52,412	4,690	118,735
1982	33,661	20,120	49,251	4,139	107,171

Refugees

Australia accepted 17,522 people under refugee and special humanitarian programs in 1982. This compared with an intake of 21,972 in 1981.

Since 1945, Australia has accepted more than 420,000 refugees or displaced persons, including 170,000 from Europe who were displaced by the Second World War and its aftermath.

Australia presently accepts refugees from about 40 countries. The largest single element in Australia's current refugee intake is the Indo-Chinese program. In 1982, 10,789 Indo-Chinese refugees were resettled in Australia.

Australia is one of 90 countries which have become party to an international convention and protocol on the status of refugees and, in so doing, have taken on certain international legal obligations to assist refugees. The final determination of a refugee's status and the decision to accept those refugees for resettlement in Australia rests with the Australian Government. Australia is also a member of the Executive Committee of the United Nations High Commission for Refugees (UNHCR). Australia's

REFUGEE ARRIVALS

Period	*Assisted*	*Other*	*Total*
Annual average—			
1961–65	1,799	n.a.	n.a.
1966–70	7,446	n.a.	n.a.
1971–75	2,773	7,776	10,549
1976–80	9,274	3,284	12,558
Annual totals—			
1977	2,202	7,272	9,474
1978	8,790	1,682	10,472
1979	14,639	2,418	17,057
1980	19,875	1,817	21,692
1981	19,055	2,917	21,972
1982	16,467	1,055	17,522

response to refugee situations is two-fold. Through aid programs directed principally through UNHCR refugees are offered protection and assistance in countries of first asylum. Those refugees for whom other durable solutions are not feasible are offered resettlement (in Australia) if they have relatives in Australia other close ties with Australia or the potential for successful settlement in their own right.

Citizenship

The grant of citizenship is controlled by the *Australian Citizenship Act* 1948. Citizenship may be acquired by birth in Australia, by birth abroad to an Australian parent, or by grant of citizenship to persons resident in Australia under conditions prescribed in the Act.

All persons are now eligible for the grant of Australian citizenship provided that they have resided in Australia for at least three years, are of good character, have an adequate knowledge of English and of the responsibilities and privileges of citizenship, and intend to reside permanently in Australia.

PERSONS GRANTED AUSTRALIAN CITIZENSHIP

Period	*Number*
Annual averages—	
1961–65	43,823
1966–70	40,934
1971–75	61,182
1976–80	75,138
Annual totals—	
1977	70,706
1978	65,094
1979	53,555
1980	68,145
1981	56,459
1982	75,047

BIBLIOGRAPHY

ABS Publications

1976 Census publications including: Population of States and Territories Adjusted for Under-Enumeration as Shown by Post-Enumeration Survey (2212.0); Summary of Population and Dwelling Characteristics: States, Territories and Australia (2409.0 to 2417.0); Characteristics of the Population and Dwellings in Local Government Areas (2427.0 to 2434.0).

1981 Census publications including: Summary Characteristics of Persons and Dwellings: States, Territories and Australia (2435.0 to 2443.0); Counts of Aboriginals and Torres Strait Islanders, Australia, States and Territories 30 June 1971, 1976, 1981 (2164.0).

Australian Demographic Statistics (3101.0).

Methods and Procedures in the Compilation of Estimated Resident Population 1981 and in the Construction of the 1971-81 Time Series (3103.0).

Estimates of Residents Temporarily Overseas, Visitors in Australia and Category Jumping (3104.0).

Estimated Age Distribution of the Population: States and Territories of Australia (3201.0).

Projections of the Population of Australia (3204.0).

Projections of the Population of the States and Territories of Australia (3214.0).

Birth Expectations of Married Women (3215.0).

Births, Australia (3301.0).

Deaths, Australia (3302.0).

Perinatal Deaths, Australia (3304.0).

Australian Life Tables (3305.0).

Marriages, Australia (3306.0).

Divorces, Australia (3307.0).

Overseas Arrivals and Departures, Australia (3401.0, 3402.0, 3404.0).

Internal Migration (3408.0).

Internal Migration in Australia, D. T. Rowland, Census Monograph, Australian Bureau of Statistics and the Department of Demography, Australian National University, 1979 (3409.0).

Australian Mortality—A Study By Causes of Death—Occasional Paper (1980/1).

Fertility of Australian Marriages (R Series, Demog 2)

CHAPTER 7

PRICES

RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses have been collected by the Australian Statistician for the years extending back to 1901 and, in some cases, by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923. (Comparable information was ascertained for the month of November in each year from 1914 to 1922.) The range of items for which retail prices data is obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in the relevant periods were published in the annual *Labour Report* (now discontinued). Descriptions of these earlier indexes were last published in *Labour Report No. 58, 1973.*

The current retail price index, the Consumer Price Index (CPI), was published for the first time in August 1960 and was compiled retrospectively to the September quarter 1948. A description of the Consumer Price Index is given below. For a more complete description of the CPI, readers are referred to a booklet entitled *A Guide to the Consumer Price Index* (6440.0), which is available from the Australian Bureau of Statistics (ABS) on request.

The Consumer Price Index

Introduction

The CPI measures quarterly changes in the price of a 'basket' of goods and services which account for a high proportion of expenditures by metropolitan wage and salary earner households. This 'basket' covers a wide range of goods and services, arranged in the following eight groups: food; clothing; housing; household equipment and operation; transportation; tobacco and alcohol; health and personal care; and recreation and education. Each group is in turn divided into sub-groups.

As from June quarter 1982 the geographic coverage of the CPI has been expanded to include a full CPI for Darwin.

Index numbers at the *group* and *All Groups* levels are published for each State capital city, Canberra, Darwin, and for the weighted average of eight capital cities. Index numbers for *All Groups* are also published for the weighted average of six State capital cities. *Subgroup index numbers* are published for the weighted average of eight capital cities.

Index population

Because the spending patterns of various groups in the population differ somewhat, the pattern of one large group, fairly homogeneous in its spending habits, is chosen for the purpose of calculating the CPI. The CPI population group is, in concept, *metropolitan employee households.* For this purpose *employee households* are defined as those households which obtain the major part of their household income from wages and salaries; and *metropolitan* means the eight capital cities.

Weighting pattern

There are 105 expenditure classes (i.e. groupings of like items) within the current CPI and each expenditure class has its own weight, or measure of relative importance. In calculating the index, price changes for the various expenditure classes are combined using these weights.

Changes in the weighting pattern have been made at approximately five-yearly intervals to take account of changes in household spending patterns. The CPI, in fact, comprises ten series of price indexes which have been linked to form a continuous series. The tenth series (i.e. the current series) was introduced as from the March quarter 1982, with a weighting pattern based on estimated household expenditure in 1979–80 and on a reference base 1980–81 = 100.0. Details of the weighting pattern are published in the booklet *A Guide to the Consumer Price Index.*

The CPI 'basket' of goods and services covers items which are considered representative of metropolitan household spending habits and whose prices can be associated with an identifiable and specific quantity of a commodity or service. For instance, price changes for a given quantity and quality of bread or refrigerators can be measured and included in the CPI. Income taxes and personal savings, on the other hand, do not form part of the CPI because they cannot be clearly associated with the purchase of a specific quantity of a good or service.

Price collection

Since the CPI is designed to measure the impact of changing prices on metropolitan wage and salary earner households, price movements are monitored in the kinds of retail outlets or other establishments where such households would normally purchase goods and services. This involves collecting prices from many sources including supermarkets, department stores, footwear stores, restaurants, garages, dental surgeries and hairdressers. Items such as bus, rail and air fares, electricity and gas charges, telephone charges and local authority rates are collected from the appropriate authorities. Information on rents is obtained from property management companies and government housing authorities. In total, around 85,000 separate price quotations are collected each quarter.

Prices of the goods and services included in the CPI are generally collected quarterly. However, some important items are priced monthly or more frequently (e.g. bread, fresh meat and fish, fresh fruit and vegetables, petrol, alcohol and tobacco) and a small number annually (e.g. seasonal clothing, local government rates and charges).

The bulk of items for which prices are collected quarterly are priced at the middle of the mid-month of the quarter (i.e. in August, November, February and May), but, to facilitate a more even spread of the field collection workload, some goods and services are priced in the first and third months of each quarter. Items priced in the third month are generally those subject to price changes at discrete points of time (e.g. electricity and postal charges, milk); in these cases information is obtained of any changes in price during the quarter so that a weighted average price for the whole quarter can be calculated.

The prices used in the CPI are those that any member of the public would have to pay on the pricing day to purchase the specified good or service. Any sales or excise taxes which the consumer must pay when purchasing specific items are included in the CPI price. Sale prices, discount prices and 'specials' are reflected in the CPI so long as the items concerned are of normal quality (i.e. not damaged or shop soiled) and are offered for sale in reasonable quantities. To ensure that the price movements reflect the experience of the bulk of the metropolitan population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

Changes in quality

The CPI aims to measure the price change of a constant basket of goods and services over time. For this reason, efforts are made to ensure that identical or equivalent items are priced in successive time periods. This involves evaluating changes in the quality of goods and services included in the index, and removing the effects of such changes so that the index reflects only the price change.

Periodic revision of the CPI

The CPI is periodically revised in order to ensure it continues to reflect current conditions. CPI revisions have usually been carried out at approximately five-yearly intervals, the most recent having been completed in June 1982. Following each revision the new list of items and weights (i.e. the new CPI basket) is linked to the previous series to form one continuous series. The process of linking ensures that the continuous series reflects only price variations and not differences in costs of the old and new baskets.

Earlier CPI series

The index has been compiled for each quarter from the September quarter 1948. The above description of the CPI refers to the tenth series which was introduced as from the March quarter 1982. A description of earlier CPI series is contained in the *Labour Report No. 58, 1973,* and in previous issues of the Year Book.

CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS

(*Base of each index: Year* 1980–81 = 100.0) (*a*)

Period	*Weighted average of six State capital cities*	*Sydney*	*Mel-bourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*	*Weighted average of eight capital cities*
Year—										
1977–78	76.7	75.8	77.0	77.1	77.5	77.8	77.1	76.1	. .	. .
1978–79	83.0	82.4	83.1	83.4	83.2	84.1	83.1	82.3	. .	. .
1979–80	91.4	91.1	91.4	91.5	91.6	91.9	91.6	91.1	. .	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.4	110.2	110.4	110.7	110.5	111.2	110.0	110.7	111.1	110.4
1982–83	123.1	123.4	122.8	122.9	123.5	122.5	121.8	124.0	123.1	123.1
Quarter—										
1981–82—										
March	111.8	111.5	111.6	112.5	111.7	112.4	111.3	111.8	113.0	111.8
June	114.5	114.6	114.3	114.1	114.4	114.6	113.4	115.2	115.0	114.5
1982–83—										
September	118.5	118.7	118.3	118.0	118.6	118.6	116.9	118.7	118.8	118.5
December	121.9	122.4	121.3	121.9	121.8	121.8	121.0	123.3	122.1	122.0
March	124.6	125.1	124.0	125.0	125.2	123.7	123.5	125.9	124.6	124.7
June	127.3	127.4	127.4	126.6	128.5	125.9	125.9	128.0	126.9	127.3

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

CONSUMER PRICE INDEX: GROUP INDEXES
WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES

(*Base of each index: Year* 1980–81 = 100.0 unless otherwise noted)

Period	*Food*	*Clothing*	*Housing*	*Household equipment and operation*	*Transport-ation*	*Tobacco and alcohol*	*Health and personal care*	*Recreation and education(a)*	*All groups*
Year—									
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	. .	100.0
1981–82	108.6	107.1	111.1	110.6	110.3	109.2	124.2	. .	110.4
1982–83	118.5	114.2	122.8	123.8	124.2	124.1	153.2	107.7	123.1
Quarter—									
1981–82—									
March	109.1	107.4	112.2	112.0	111.3	110.4	131.2	100.0	111.8
June	110.7	110.0	115.9	115.6	114.7	112.9	134.5	101.2	114.5
1982–83—									
September	114.0	111.2	118.9	119.1	121.1	118.0	143.1	103.3	118.5
December	116.8	113.7	122.3	123.6	122.7	124.0	151.2	105.7	122.0
March	118.9	113.9	124.1	125.5	126.4	125.8	157.4	109.8	124.7
June	124.2	117.8	126.0	127.1	126.4	128.5	161.1	112.0	127.3

(*a*) New grouping, base March quarter 1982 = 100.0. Group index not compiled for quarters prior to the base period.

CONSUMER PRICE INDEX: GROUP INDEXES SIX STATE CAPITAL CITIES, CANBERRA AND DARWIN

(*Base of each index: Year* 1980–81 = 100.0) (*a*)

Year	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*
FOOD								
1977–78	70.1	71.8	70.3	73.1	74.4	71.6	70.9	. .
1978–79	78.9	79.9	77.6	80.6	82.1	80.3	79.7	. .
1979–80	90.6	90.6	89.8	90.9	91.7	91.6	90.8	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	107.9	108.6	109.2	108.8	110.2	108.7	107.7	110.3
1982–83	117.1	119.3	119.6	118.9	119.9	118.6	117.4	119.5
CLOTHING								
1977–78	81.3	81.6	82.0	80.5	81.2	80.4	81.3	. .
1978–79	87.2	87.6	87.8	87.0	87.0	86.7	87.3	. .
1979–80	93.2	93.4	93.8	93.1	92.9	93.1	93.1	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	106.8	106.9	108.2	107.5	107.2	106.4	107.5	108.7
1982–83	114.1	113.4	116.3	115.0	114.0	112.8	114.4	115.6
HOUSING								
1977–78	75.3	82.6	80.4	81.9	85.1	83.9	85.0	. .
1978–79	81.7	86.7	85.8	86.0	89.2	88.2	88.4	. .
1979–80	89.7	91.6	91.6	92.1	92.5	93.2	92.8	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	111.1	111.2	113.0	110.1	109.1	107.4	112.4	111.7
1982–83	121.7	123.7	128.0	123.4	118.7	116.3	124.1	125.4
HOUSEHOLD EQUIPMENT AND OPERATION								
1977–78	80.1	76.8	79.4	78.0	77.4	77.6	75.4	. .
1978–79	84.3	82.1	85.0	82.7	83.0	82.4	80.8	. .
1979–80	90.4	89.7	90.5	90.4	89.4	89.9	89.2	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.7	110.9	110.2	110.9	109.5	110.0	109.4	110.3
1982–83	126.1	123.0	122.1	123.3	120.4	121.7	124.1	122.4
TRANSPORTATION								
1977–78	74.0	73.6	74.5	74.8	73.1	75.1	73.0	. .
1978–79	81.3	79.9	81.9	82.0	81.1	79.8	79.2	. .
1979–80	91.5	91.0	91.9	91.9	90.6	90.6	90.7	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	110.3	108.6	112.2	111.2	111.9	112.8	112.4	108.4
1982–83	127.0	120.5	124.7	124.9	123.5	126.8	128.2	119.7
TOBACCO AND ALCOHOL								
1977–78	73.6	75.8	74.4	77.2	74.9	74.8	74.8	. .
1978–79	84.8	87.1	88.8	87.4	87.3	86.4	85.2	. .
1979–80	92.4	94.7	94.1	93.6	94.4	93.0	93.0	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	109.9	108.3	109.5	108.5	109.1	109.1	108.6	110.4
1982–83	126.9	121.4	123.4	123.1	122.9	124.0	123.5	127.3
HEALTH AND PERSONAL CARE								
1977–78	84.4	89.3	95.0	86.7	91.7	85.8	83.4	. .
1978–79	82.0	85.3	84.8	80.3	84.5	82.9	81.8	. .
1979–80	90.7	90.8	89.8	90.4	96.7	90.8	90.2	. .
1980–81	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981–82	121.8	128.7	114.1	121.7	130.9	120.5	124.3	136.4
1982–83	149.8	160.1	134.1	156.5	159.8	143.0	153.3	163.9
RECREATION AND EDUCATION(*b*)								
1982–83	107.5	108.7	107.3	106.6	105.9	109.4	109.2	106.5

(*a*) The index numbers are designed to measure movements in retail prices of specified groups of items for each city individually. They measure variations from time to time and not differences in price levels between cities. (*b*) The new Recreation and Education group is not compiled for periods prior to March quarter 1982.

Previous retail price indexes

Five series of retail price indexes were compiled by the ABS at various times prior to the introduction of the Consumer Price Index in 1960. These indexes are described in Year Book No. 61.

An index of retail price movements from 1901 onwards has been derived by linking together the following indexes: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946–47, the 'C' Series Retail Price Index; from 1946–47 to 1948–49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948–49 onwards, the Consumer Price Index. The continuous series derived in this way is shown in the table below. As the indexes differ greatly in scope, the resulting series is only a broad indication of long-term trends in retail prices.

RETAIL PRICE INDEX NUMBERS
WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(*Base: Year* 1945=100)

Year	*Index number*	*Year*	*Index number*	*Year*	*Index number*
1901	47	1929	91	1957	229
1902	50	1930	87	1958	233
1903	49	1931	78	1959	237
1904	46	1932	74	1960	245
1905	48	1933	71	1961	252
1906	48	1934	73	1962	251
1907	48	1935	74	1963	252
1908	51	1936	75	1964	258
1909	51	1937	78	1965	268
1910	52	1938	80	1966	276
1911	53	1939	82	1967	286
1912	59	1940	85	1968	293
1913	59	1941	89	1969	302
1914(*a*)	61	1942	97	1970	313
1915(*a*)	70	1943	101	1971	332
1916(*a*)	71	1944	100	1972	352
1917(*a*)	75	1945	100	1973	385
1918(*a*)	80	1946	102	1974	443
1919(*a*)	91	1947	106	1975	510
1920(*a*)	103	1948	117	1976	579
1921(*a*)	90	1949	128	1977	650
1922(*a*)	87	1950	140	1978	702
1923	89	1951	167	1979	766
1924	88	1952	196	1980	844
1925	88	1953	205	1981	926
1926	90	1954	206	1982	1,028
1927	89	1955	211	1983	1,132
1928	89	1956	224		

(*a*) November

INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES ALL GROUP INDEXES(a)

(Source: *Monthly Bulletin of Statistics* of the Statistical Office of the United Nations)
(*Base of each index: Year* 1970 = 100)

Period	*Australia (b)*	*Canada*	*Federal Republic of Germany*	*Indonesia (Djakarta) (c)*	*Japan*	*New Zealand*	*United Kingdom*	*United States of America*
1977	208	165	146	324	204	218	249	156
1978	224	180	150	351	211	244	270	168
1979	244	197	156	132	219	277	306	187
1980	269	217	164	156	236	325	361	212
1981	295	244	174	175	248	375	404	234
1982	328	270	183	192	255	435	438	248
Quarter—								
1981—								
Sept.	297	248	175	177	249	382	409	238
Dec.	309	254	177	179	252	396	419	241
1982—								
March	314	260	180	189	252	409	426	243
June	322	268	183	190	254	430	440	247
Sept.	333	274	185	193	255	445	442	251
Dec.	343	278	186	197	258	457	445	252

(*a*) The items priced and the levels at which they are priced in these indexes vary widely according to the intended purposes of the indexes of the various countries. The index numbers show fluctuations in prices in each country and do not measure relative price levels between countries. (*b*) Consumer Price Index converted to base: 1970 = 100. (*c*) From March 1979—revised figures, base April 1977–March 1978 = 100.

Wholesale price indexes

Introduction

The ABS compiles a range of Industry Price and External Trade Price Indexes relating to materials used and articles produced by defined sectors of the Australian economy. Each index is calculated using fixed weights. In compiling the indexes prices are collected from representative suppliers, manufacturers, importers or exporters of the goods included in the indexes. For all the industry price indexes (except the *Price Index of Materials Used in Manufacturing Industry*) prices are generally collected at the mid point of each month. In the case of the *Price Index of Materials Used in Manufacturing Industry* and the *Export Price Index*, average monthly prices are used in compiling the indexes. Weighted average quarterly prices are used to compile the *Import Price Index*.

All the indexes (except the *Import Price Index*) are compiled and published monthly. The *Import Price Index* is compiled and published quarterly. Published index numbers for financial years are the simple averages of the relevant monthly or quarterly index numbers. Annual index numbers for these indexes are shown below. Index numbers for each month (or quarter for the *Import Price Index*) together with more detailed information concerning methods used in compiling these indexes, are shown in the bulletins published for each index. Information on the weighting patterns for each index is available from the ABS on request.

Price index of materials used in house building

This index measures changes in prices of selected materials used in the construction of houses. Its composition reflects the usage of materials in houses which were selected as representative for the purpose. Weights are based on the year 1968–69. The reference base of the index is the year 1966–67 = 100.0. Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in House Building* (6408.0), *Labour Report* No. 58, 1973 and Year Book No. 60.

PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1966–67=100.0)

	Concrete mix, cement and sand	*Cement products*	*Clay bricks, tiles, etc.*	*Timber, board and joinery*	*Steel products*	*Other metal products*
Value Weight	*5.73%*	*8.10%*	*12.85%*	*36.16%*	*5.86%*	*7.20%*
1977–78	239.0	284.6	245.8	275.0	287.7	220.1
1978–79	255.5	303.8	262.2	290.8	307.6	239.7
1979–80	292.8	336.3	294.8	331.5	341.0	281.7
1980–81	334.1	383.1	334.9	377.8	389.4	314.7
1981–82	373.8	438.5	375.9	406.8	435.0	343.1
1982–83	430.9	498.1	424.8	435.2	486.7	374.8

	Plumbing fixtures, etc.	*Electrical instal-lation materials*	*Installed appli-ances*	*Plaster and plaster products*	*Miscel-laneous materials*	*All groups*
Value weight	*3.74%*	*1.63%*	*5.13%*	*5.64%*	*7.96%*	*100.00%*
1977–78	239.1	215.5	193.3	191.8	230.4	252.0
1978–79	244.1	240.0	202.9	204.3	248.2	268.1
1979–80	278.1	282.1	217.6	222.8	278.2	302.9
1980–81	319.3	316.0	240.6	244.6	319.6	344.0
1981–82	351.5	345.9	263.9	273.1	348.7	377.9
1982–83	373.8	396.5	282.7	317.8	381.3	415.7

PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES

(*Base of each index: Year* 1966–67=100.0)

	State capital cities(a)						*Weighted average of six State capital cities*
	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	
1977–78	254.0	238.6	265.1	270.7	253.4	256.7	252.0
1978–79	272.7	251.4	281.3	292.1	268.2	273.6	268.1
1979–80	309.5	283.4	315.0	338.5	299.4	304.2	302.9
1980–81	347.6	324.7	363.7	386.1	337.6	338.2	344.0
1981–82	378.5	355.5	407.2	427.2	373.2	371.7	377.9
1982–83	410.3	394.9	448.0	480.3	409.3	406.5	415.7

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

Price index of materials used in building other than house building

The *Price Index of Materials Used in Building Other than House Building* (6407.0), on a reference base 1966–67 = 100.0, was discontinued in January 1981. Monthly index numbers on a 1966–67 = 100.0 reference base are available for the period 1966–67 to 1979–80. A description of the discontinued index is shown in previous year books and in the monthly publications issued up to and including January 1981.

The revised price index of materials used in building other than house building

The revised *Price Index of Materials Used in Building Other than House Building* was introduced in February 1981 on reference base 1979–80 = 100.0.

This index measures changes in prices of selected materials used in the construction of buildings other than houses. Its composition reflects the usage of materials in the construction of buildings (other than houses) commenced in the three years ending June 1977.

Further information concerning the method of compiling the index can be obtained from the February 1981 issue of the publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities* (6407.0).

Price index of materials used in building other than house building—Darwin

The Price Index of Materials Used in Building Other than House Building for Darwin was introduced in September 1982 on a reference base 1981–82=100.0. The scope of the index is the same as for the other capital cities. Further information concerning the method of compiling the index can be obtained from the September 1982 issue of the *Price Index of Materials Used in Building Other than House Building, Six State Capital Cities and Darwin* (6407.0). The index includes 64 items which are combined to produce an 'All groups' index. The percentage contributions for individual items and groups for Darwin were published in Appendix A of the September 1982 issue of the above mentioned publication (6407.0).

The tables below show annual index numbers for ASIC Groups and 'All groups' for the weighted average of six State capital cities. In addition, 'All groups' index numbers for each State capital city and Darwin are shown. Index numbers for selected materials and special combinations of materials and monthly index numbers are shown in each issue of the monthly price index publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities and Darwin* (6407.0).

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING GROUP INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC) WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(Base of each index: Year 1979-80=100.0)

	Selected ASIC Groups					
	Wood and wood products	*Clay products and refractories*	*Cement and concrete products*	*Basic iron and steel*	*Structural metal products*	*Sheet metal products*
Value weight	*(253)* *7.97%*	*(286)* *4.16%*	*(287)* *15.42%*	*(294)* *4.69%*	*(314)* *29.24%*	*(315)* *3.68%*
1979-80	100.0	100.0	100.0	100.0	100.0	100.0
1980-81	114.3	114.3	113.0	113.2	113.9	114.5
1981-82	126.5	126.8	125.2	126.6	126.4	130.3
1982-83	140.2	141.2	143.4	138.9	138.3	148.5

	Selected ASIC Groups				
	Other fabricated metal products	*Appliances and electrical equipment*	*Industrial machinery and equipment*	*Other*	*All groups*
Value weight	*(316)* *2.77%*	*(335)* *9.70%*	*(336)* *8.79%*	*13.58%*	*100.00%*
1979-80	100.0	100.0	100.0	100.0	100.0
1980-81	112.9	109.8	111.2	112.6	112.9
1981-82	126.2	122.2	124.2	123.6	125.4
1982-83	142.5	139.4	142.3	139.2	140.5

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING—ALL GROUPS SIX STATE CAPITAL CITIES AND DARWIN(a)

	Weighted average of six State capital cities	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Darwin*
	INDEX NUMBERS							
Base Year	1979-80=100.0							1981-82=100.0
1977-78(*b*)	82.4	81.8	83.0	83.2	80.9	83.4	84.1	n.a.
1978-79(*b*)	88.5	88.3	88.5	88.9	87.3	89.4	89.6	n.a.
1979-80	100.0	100.0	100.0	100.0	100.0	100.0	100.0	n.a.
1980-81	112.9	113.1	112.7	113.2	113.8	112.2	111.6	n.a.
1981-82	125.4	126.6	123.6	126.3	127.4	123.8	122.9	100.0
1982-83	140.5	142.2	136.9	142.2	144.5	139.2	136.4	111.3

(*a*) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.
(*b*) The index series for 1977 78 and 1978–79 are based on the series previously published on a reference base 1966–67=100.0. They have been converted to the reference base 1979–80=100.0 by linking the old and new series in the year 1979–80.

Price index of materials used in manufacturing industry

This index measures changes in prices of materials (including fuels) used by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC), as described in the ABS publication *Australian Standard Industrial Classification (Preliminary Edition)* 1969 (1201.0). The index is on a *net basis*, i.e. it relates in concept only to those materials which are used by establishments within the Manufacturing Division in Australia and which have been produced by establishments outside that Division. Materials purchased by establishments classified to the Australian Manufacturing Division from other establishments in that Division are outside the scope of the index.

The reference base of the index is the year 1968–69=100.0. The weighting base of the index corresponds to the year 1971–72. The items included in the index were allocated weights in accordance with estimated manufacturing usage in 1971–72 valued at relevant prices applying in the reference base year 1968–69. The selected items are combined for publication purposes into broad groups using two different classifications:

(i) Australian Standard Industrial Classification (ASIC), and
(ii) Standard International Trade Classification (SITC (R)).

Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in Manufacturing Industry, Australia* (6411.0) and Year Book No. 61.

PRICE INDEX OF MATERIALS USED IN MANUFACTURING INDUSTRY(a): GROUP INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

(*Base of each index: Year* 1968–69=100.0)

	Imported materials				*Home produced materials*					
	Agriculture	*Mining*	*Manufacturing*	*Total imported materials*	*Agriculture*	*Forestry and fishing*	*Mining*	*Electricity*	*Total home produced materials*	*All groups*
Value weight	*1.92%*	*4.17%*	*21.07%*	*27.16%*	*47.04%*	*1.12%*	*18.92%*	*5.76%*	*72.84%*	*100.00%*
1977 78	303.4	515.3	201.6	257.0	162.4	273.5	211.4	160.9	176.7	198.5
1978 79	285.3	542.6	222.1	275.7	228.8	263.5	281.8	173.8	238.7	248.8
1979-80	329.2	911.8	261.8	366.4	280.3	300.3	403.5	186.7	305.2	321.8
1980 81	293.6	1,146.3	278.7	413.0	295.9	344.4	454.1	210.2	330.9	353.2
1981 82	264.5	1,247.8	290.6	435.7	282.1	363.0	471.3	253.3	330.2	358.9
1982 83p	303.6	1,318.7	310.5	464.8	288.6	378.8	541.6	333.9	359.3	387.9

For footnote, see table following

PRICE INDEX OF MATERIALS USED IN MANUFACTURING INDUSTRY(a): GROUP INDEX NUMBERS BASED ON STANDARD INTERNATIONAL TRADE CLASSIFICATION (REVISED)

(*Base of each index: Year* 1968–69=100.0)

	Manufactured materials (imported) (b)			*Other materials (imported and home produced) (c)*			
	Chemicals	*Metal manufactures, components for transport equipment and machinery*	*Other manufactured materials*	*Food, live animals and tobacco*	*Crude materials (excl. fuels)*	*Electricity, gas and fuels*	*All groups*
Value weight	*6.67%*	*5.21%*	*5.76%*	*45.87%*	*20.66%*	*15.83%*	*100.00%*
1977 78	170.7	246.6	185.1	166.6	199.2	291.0	198.5
1978 79	180.9	271.6	201.3	232.5	227.4	362.4	248.8
1979 80	225.1	294.2	230.3	285.1	288.8	554.6	321.8
1980 81	244.7	310.3	242.9	299.5	286.9	695.5	353.2
1981 82	252.8	320.7	257.3	284.1	280.7	771.8	358.9
1982-83p	271.0	344.1	280.6	291.0	304.3	880.7	387.9

(a) The index is on a net basis and relates in concept only to materials that enter Australian manufacturing industry from other sectors of the Australian economy or from overseas. (b) Excluding the manufactured imported crude materials listed in footnote (c). (c) Includes imported fuel oil and the following manufactured imported crude materials: Synthetic rubber, hardwood, softwood, woodpulp, synthetic fibre, vegetable oils.

Price indexes of articles produced by manufacturing industry

These indexes measure changes in the prices of articles produced by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC). The indexes are on a *net basis*, i.e. they relate in concept only to those articles which are produced in defined sectors of Australian manufacturing industry for sale or transfer to other sectors or for export or for use as capital equipment. Articles which are sold or transferred to other establishments within the sector for further processing (as materials, components, fuels, etc.) are excluded.

The following sector price indexes are published:

(i) a net index for the Manufacturing Division of ASIC (known as the *All Manufacturing Industry Index*), and

(ii) net indexes for the twelve sub-divisions within the Manufacturing Division.

The reference base of the index is the year 1968–69=100.0. The weighting base of the index corresponds to the year 1971–72. The items included in these indexes were allocated weights in accordance with estimated *net* sector production in the year 1971–72, valued at the relevant prices applying in the reference base year 1968–69.

The selected items are combined for publication purposes using the structure of the Australian Standard Industrial Classification.

Further information concerning the method of compiling the index and monthly index numbers for sub-divisions and special groupings are shown in the publication *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0). Further information about the indexes is also shown in Year Book No. 62.

PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY (*a*)

(*Base of each index: Year* 1968–69=100.0)

		Net subdivision indexes (c)					
Year	*All Manufacturing Industry Index (b)*	*Food, beverages and tobacco (21–22)*	*Textiles (23)*	*Clothing and footwear (24)*	*Wood, wood products and furniture (25)*	*Paper, paper products and printing (26)*	*Chemical, petroleum and coal products (27)*
1977-78	213.8	195.6	193.3	225.2	264.0	231.7	200.7
1978-79	237.4	226.4	205.1	238.4	280.4	245.0	233.1
1979-80	274.9	266.5	228.8	255.3	315.5	269.6	307.4
1980-81	305.2	290.9	252.7	276.5	357.3	304.2	366.9
1981-82	329.0	301.9	270.6	298.1	388.4	346.0	401.1
1982-83p	360.4	328.2	286.7	316.0	425.5	390.4	442.6

Year	*Glass, clay and other non-metallic mineral products (28)*	*Basic metal products (29)*	*Fabricated metal products (31)*	*Transport equipment (32)*	*Other industrial machinery and equipment and household appliances (33)*	*Miscellaneous manufacturing products (34)*
1977-78	219.8	214.0	268.7	211.6	215.3	192.4
1978-79	236.8	237.2	287.7	230.2	232.2	209.8
1979-80	265.2	282.7	323.9	252.2	261.3	252.5
1980-81	300.2	297.8	371.6	275.7	289.7	273.9
1981-82	337.5	315.3	414.2	303.2	320.7	289.5
1982-83p	383.3	345.5	452.5	335.5	353.7	313.4

(*a*) For a full description of Division C, 'Manufacturing' and the subdivisions within the Manufacturing Division, *see Australian Standard Industrial Classification* (ASIC), *Preliminary Edition*, 1969. (*b*) This index is on a net division basis and relates in concept only to articles which are produced in the Manufacturing Division of ASIC for sale or transfer outside the Division. (*c*) These indexes are on a net subdivision basis; the index for each subdivision relates in concept to articles which are produced in that subdivision for sale or transfer outside the subdivision.

The Prime Minister of Australia, the Hon. R. J. L. Hawke, laying the foundation stone of the new Parliament House, Canberra, 4 October 1983.

Photo: Australian Information Service

USA
12
KA-6
KA-6

Left
The battle for
Australia II (KA-6
manoeuvring for
Cup race off New
cup, winning four
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Photo: Australian A

Right
Australia's fastes
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Photo: Australian In

Below right
Severe duststorm
8 February 1983.
Photo: Bureau of Me

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American yacht Liberty (US40)
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DOLLAR
ELIZABETH II
AUSTRALIA 1984

Australia's one dollar coin, released on 14 May 1984
Composition: 92% copper, 6% aluminium, 2% nickel
Nominal mass: 9.0 grammes
Nominal diameter: 25.0mm
Thickness (maximum): 2.8mm
Edge alternately milled and plain segments
Reverse: 5 kangaroos by Stuart Devlin CMG
Obverse: Standard Queen Elizabeth II by Arnold Machin OBE R.A.
Photo: Royal Australian Mint

100
One Hundred Dollars
100
Australia
ABC 000000
100
Australia
ABC 000000

Australia's one hundred dollar note released on 26 March 1984
Size: 172 x 82.5mm
Colour: Predominantly blue/grey with a multicoloured background.
Front: The theme is scientific achievement carrying a portrait of Antarctic explorer and geologist Sir Douglas Mawson (1882-1958) with background suggesting Antarctic aural lights.
Back: A portrait of Mr John Tebbutt (1834-1916), a little known pioneer in Australian astronomy and an observatory he built at Windsor, North-west of Sydney.
Designer: Mr Harry Williamson of Sydney. Mr Gordon Andrews, who designed Australias other notes, and Mr Phillip Cox acted as consultants.
Photo: Reserve Bank of Australia

Import Price Index

Introduction

The first issue of the Import Price Index produced by the ABS was released in May 1983, on a reference base 1981–82 = 100.0 and covers the period September quarter 1981 to December quarter 1982. This index replaces the import price index previously published by the Reserve Bank of Australia on reference base 1966–67 = 100.

Scope of the index

The Import Price Index measures changes in prices of *imports of merchandise* into Australia. The index numbers for each quarter relate to prices of imports landed in Australia during the quarter.

Items and weights

The Import Price Index covers either directly or indirectly, about 98 per cent of imports of merchandise in 1980–81. The index is a fixed weights index, with the weights allocated in accordance with the average value of imports of the relevant commodities (expressed in 1981–82 prices) over the three years ended June 1981.

Classifications used

The selected commodities have been combined into broad index groups in three ways. Index numbers are compiled for:

(i) groups defined in terms of the Sections (1 digit) and Divisions (2 digit) of the *Australian Import Commodity Classification* (AICC) 1980–81 (1204.0) (based on the Standard International Trade Classification, Revision 2);

(ii) groups on an *industry of origin* basis defined in terms of Divisions (1 digit) and Subdivisions (2 digit) of the 1978 edition of the *Australian Standard Industrial Classification* (ASIC) (1201.0);

(iii) groups based on the 1976 edition of the *United Nations Classification by Broad Economic Categories* (BEC).

In addition, BEC categories have been rearranged to form the broader end use classes: Capital goods, Intermediate goods and Consumption goods.

Full details of the weighting patterns of the Import Price Index, ie the percentage contributions for index items and groups according to the three classifications mentioned above were contained in the December Quarter 1982 issue of the *Import Price Index* (6414.0) and are available on request from the ABS.

Prices

Prices of individual shipments are obtained from major importers of the selected items and relate to the quarter in which the goods arrive in Australia. Imports are priced on a *free on board (f.o.b.)* country of origin basis. Freight and insurance charges involved in shipping goods from foreign to Australian ports are therefore *excluded* from the prices used in the index as are Australian import duties. The prices used in the index are the weighted average of all shipments reported by the selected respondent importer of the specified goods imported during the quarter.

All prices used in the index are expressed in Australian currency. As a result, changes in the relative values of the Australian dollar and overseas currencies can have a direct impact on price movements of imports purchased in currencies other than Australian dollars. Prices reported in a foreign currency are converted to Australian dollars using the exchange rate prevailing at the time of departure from the foreign port. Where imports are purchased at prices expressed in terms of a foreign currency and forward exchange cover is used, the prices used in the index EXCLUDE forward exchange cover.

The price series used relate to specific standards, grades, types, etc, of each item with the aim of incorporating in the index, price changes for imports of representative goods of constant quality. In order to lessen the impact of price variation attributable solely to changes, over time, in the country of origin of imported goods, prices are obtained in respect of the predominant countries of origin for each of the specified goods priced. Prices are combined using fixed weights between countries of origin but these weights are reviewed periodically and revised where necessary.

Further information concerning the method of compiling the index is contained in the publication *Import Price Index, Australia* (6414.0). The tables below show annual index numbers for groups defined in terms of AICC Sections and ASIC Divisions as well as the BEC components and the End use classes. Index numbers for more detailed groups and quarterly index numbers are shown in each issue of the quarterly publication.

IMPORT PRICE INDEX

INDEX NUMBERS BASED ON THE AUSTRALIAN IMPORT COMMODITY CLASSIFICATION (AICC)

(Base of each index: Year 1981–82 = 100.0)

		AICC Sections								
Year	*All groups*	*Food and live animals chiefly for food (0)*	*Beverages and tobacco (1)*	*Crude materials, inedible, except fuels (2)*	*Mineral fuels, lubricants and related materials (3)*	*Animal and vegetable oils, fats and waxes (4)*	*Chemicals and related products, n.e.s. (5)*	*Manufactured goods classified chiefly by material (6)*	*Machinery and transport equipment (7)*	*Miscellaneous manufactured articles and non-monetary gold (8 & 9 part)*
1981 82 . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1982 83p . . .	110.4	111.7	121.0	104.8	109.2	98.0	106.6	109.4	112.1	112.2

IMPORT PRICE INDEX

INDUSTRY OF ORIGIN INDEX NUMBERS BASED ON THE AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC)

(Base of each index : Year 1981–82 = 100.0)

	ASIC Divisions		
Year	*Agriculture forestry, fishing and hunting (A)*	*Mining (B)*	*Manufacturing (C)*
1981–82	100.0	100.0	100.0
1982–83p . . .	115.0	110.6	110.3

IMPORT PRICE INDEX

INDEX NUMBERS FOR BROAD ECONOMIC CATEGORIES (BEC) AND END USE CLASSES

(Base of each index: Year 1981–82 = 100.0)

	Broad economic categories						*End use classes*[1]		
Year	*Food and beverages*	*Industrial supplies not elsewhere specified*	*Fuels and lubricants*	*Capital goods (except transport equipment) and parts and accessories thereof*	*Transport equipment and parts and accessories thereof*	*Consumer goods not elsewhere specified*	*Capital goods*	*Intermediate goods*	*Consumption goods*
1981-82	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1982 83p	110.2	107.9	109.2	112.1	113.3	110.9	111.1	109.3	112.2

1. Broad Economic Categories rearranged into end use classes.

Export price index

An annual index of export prices has been published by the bureau since its inception. Brief descriptions of indexes covering the period between 1901 and 1979 are shown in Year Book No. 55, pages 256–7 and Year Book No. 58, pages 240–2.

The revised Export Price Index was introduced in July 1979. It relates to *all exports of merchandise* from Australia and includes re-exports of merchandise (that is, goods which are imported into Australia and exported at a later date without physical transformation). The index numbers for each month relate to prices of those exports of merchandise that are physically shipped from Australia during that month.

The reference base of the index is the year 1974–75 = 100. The commodities directly represented in the index were selected on the basis of their export values in the years 1974–75, 1975–76 and 1976–77. They were allocated weights in accordance with the average value of exports for each commodity over the period 1974–75 to 1976–77. The 1975–76 and 1976–77 export values for each commodity were revalued at 1974–75 prices before averaging.

The selected commodities are combined for publication purposes into broad index groups using two different classifications:

(i) Australian Export Commodity Classification, 1978–79 (AECC), (1203.0);
(ii) Australian Standard Industrial Classification, 1978 (ASIC), (1201.0).

Further information concerning the method of compiling the index can be obtained from the July 1979 issue of the publication *Export Price Index* (6405.0) and Year Book No. 64. More detailed index numbers are shown in the monthly publication *Export Price Index, Australia* (6405.0).

EXPORT PRICE INDEX:
INDEX NUMBERS BASED ON AUSTRALIAN EXPORT COMMODITY CLASSIFICATION (AECC)
(*Base of each index: Year* 1974–75=100)

		AECC Sections				
Year	*All groups*	*Food and live animals (0)*	*Crude materials inedible (except fuels) (2)*	*Mineral fuels and lubricants (3)*	*Animal and vegetable oils and fats (4)*	*Chemicals and other manufactured exports (5, 6, 7 and 8)*
1977–78 . .	128	100	149	167	136	125
1978–79 . .	144	119	162	170	157	146
1979–80 . .	174	145	191	198	169	188
1980–81 . .	185	162	202	217	145	181
1981–82 . .	187	147	219	247	139	178
1982–83p . .	203	152	242	287	138	191

EXPORT PRICE INDEX:
INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC)
(*Base of each index: Year* 1974–75=100)

	ASIC Divisions		
Year	*Agriculture, forestry, fishing and hunting (A)*	*Mining (B)*	*Manufacturing (C)*
1977–78 . . .	105	159	127
1978–79 . . .	114	163	150
1979–80	137	180	190
1980–81	150	191	199
1981–82	153	221	191
1982–83p . . .	158	262	202

Previous wholesale price indexes

The *Melbourne Wholesale Price Index*, first compiled in 1912, was discontinued in 1961. The *Wholesale Price* (*Basic Materials and Foodstuffs*) *Index*, which replaced the Melbourne Wholesale Price Index from 1936–37, was discontinued in 1970. Further information concerning these indexes is shown in Year Book No. 61.

PETROLEUM PRODUCTS PRICING AUTHORITY

General

The Petroleum Products Pricing Authority which was established on 26 June 1981 pursuant to the *Petroleum Products Pricing Act* 1981, took over from the Prices Justification Tribunal the responsibility for price surveillance of the petroleum products industry. The functions of the Authority are to conduct inquiries in relation to prices for the supply of petroleum products or related services within Australia, and to report to the Treasurer the results of every such inquiry.

Organisation

The Authority is constituted by a full-time Commissioner and is staffed by persons appointed or employed under the *Public Service Act* 1922.

Legislative Provisions

Inquiries conducted by the Authority at the request of the Minister or with his approval may be either:

(a) A prices justification inquiry, that is to say an inquiry as to whether the price or prices at which a company or companies supply or supplies, or propose or proposes to supply, petroleum products or services of a particular description is or are justified, or

(b) an inquiry not being a prices justification inquiry into such specified matter or matters relating to the prices at which petroleum products or services are supplied.

The Authority's enabling legislation also provides for the following:

(i) In conducting a prices justification inquiry and making its reports on such an inquiry, the Authority shall have due regard to the need for the company or companies concerned to achieve a level of profitability that is sufficient to enable the company or companies to mantain an adequate level of investment and employment.

(ii) Section 19 of the Act states that declared companies are guilty of an offence in raising prices of petroleum products or services without prior notice to the Authority and the occurrence of certain specified events. These events include the expiration of the prescribed period or the serving of a notice by the Authority on a company stating that the Authority does not intend holding an inquiry as to whether the proposed price is justified. A declared company means a company declared by the Minister by notice published in the Commonwealth of Australia Gazette.

(iii) With certain exceptions, the prescribed period is the period of 21 days commencing on the day the Authority receives the notice under Section 19. In the case where, following receipt of a notice, a public inquiry is held, the prescribed period commences on the day the Authority receives the notice and ends on the earlier of the day the Authority's report on the proposed price is received by the company or fourteen days after the expiration of the 3 months period commencing on the date that the Authority served notice on the company that the public inquiry was to be held. Provision exists for the extension of prescribed periods in certain circumstances.

(iv) The Authority on the application by companies is empowered to grant interim price increases to apply during the course of the Authority's consideration of proposed or existing prices.

(v) Before commencing to hold an inquiry reasonable notice will be given in the Commonwealth of Australia Gazette and in newspapers specifying the matter that is the subject of the inquiry and the time and place at which the inquiry is to be commenced.

(vi) Any person or body of persons may apply to the Authority to be made a party to an inquiry. If the application is granted such a party is entitled to give evidence or call witnesses to give evidence and to make submissions to the Authority.

(vii) Subject to the Act and to any direction given to the Authority by the Minister, the procedures to be followed at an inquiry are at the discretion of the Commissioner. The Authority is not bound by the rules of evidence.

(viii) Confidential submissions and evidence may be taken in private if the Authority considers that it is desirable to do so.

(ix) The Commissioner or an associate Commissioner (for a particular inquiry) has the power to obtain information.

(x) The Authority shall, as soon as practicable after 30 June, prepare and furnish to the Minister a report with respect to the operations of the Authority during the year ended on that date.

HOUSEHOLD EXPENDITURE SURVEYS

During the financial years 1974–75 and 1975–76, the ABS conducted two surveys in order to obtain information about the expenditure patterns of private households. The 1974–75 survey was confined to a sample of households in the six State capital cities and Canberra (collection in Darwin being suspended in December 1974 due to cyclone Tracy), while the coverage of the 1975–76 survey was extended to include other urban and rural regions. Apart from limited attempts in 1910–11 and 1913 to assess the spending patterns of Australian households, these surveys were the first official collections of household expenditure statistics conducted in this country.

Surveys of household expenditure and related topics have formed an integral part of the statistical programmes of a number of other countries for many years. Perhaps the most important reason for the collection of data relating to expenditure at the household level is to provide information for use in improving the representativeness of the items and the weighting pattern used to compile the Consumer

Price Index (*see* page 151). Household expenditure statistics also provide a rich source of data needed for a wide range of policy and research purposes. These include the planning of welfare services; assessing the need for, and effect of, programmes in fields such as housing, education and health; assessing the impact of taxation and government benefits; and improving estimates of private final consumption expenditure in the National Accounts.

Details about the 1974–75 and 1975–76 surveys are contained in Year Book No. 63, pages 119–123. A further household expenditure survey will be conducted during the calendar year 1984.

BIBLIOGRAPHY

ABS Publications

Monthly summary of statistics (1304.0)
Digest of current economic statistics (monthly) (1305.0)
Consumer price index (quarterly) (6401.0)
Average retail prices of selected items (quarterly) (6403.0)
Export price index (monthly) (6405.0)
Price index of materials used in building other than house building (monthly) (6407.0)
Price index of materials used in house building (monthly) (6408.0)
Price indexes of metallic materials (monthly) (6410.0)
Price index of materials used in manufacturing industry (monthly) (6411.0)
Price indexes of articles produced by manufacturing industry (monthly) (6412.0)
Import price index (quarterly) (6414.0)

CHAPTER 8

MANPOWER

The principal subjects covered in this chapter are labour force, unemployment, wage rates, earnings, hours of work, industrial disputes, labour organisations and Commonwealth Government employment and training programs. Further detail on these subjects is contained in *Labour Statistics, Australia* (6101.0) and in other publications to which reference is made in the various sections of this chapter.

THE LABOUR FORCE

This section contains a number of series relating to the labour force and its components. The labour force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid family helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the labour force are obtained from censuses of population.

In addition, estimates of the labour force are obtained through the population survey, which is conducted monthly by means of personal interviews at a sample of households throughout Australia (*see* below).

The population census

Statistics on the labour force from the Census of Population and Housing, conducted on 30 June 1981 are available on magnetic tape, microfiche and in publications. Three information papers on the availability of magnetic tape have been published:

1 *Magnetic Tape Summary Files* (2143.0). Describes the content of the small area summary files and associated files.

2 *Sample Files on Magnetic Tapes* (2165.0). Contains data for two independent one per cent samples of unidentified persons and households.

3 *Detailed Tables on Magnetic Tape* (2166.0). Provides a large amount of detailed statistical data for users who have access to suitable computers.

Details of Census data available on microfiche are contained in *Census 81—Microfiche* (2145.0)

Statistical publications are: *Persons and Dwellings in Local Government Areas and Urban Centres* (2401.0–2408.0), *Summary Characteristics of Persons and Dwellings* (2435.0–2443.0) and *Cross-Classified Characteristics of Persons and Dwellings* (2444.0–2452.0).

All tables except those in publications 2401.0–2408.0 are listed in *Catalogue of Census Tables Edition Two* (2139.0).

The population survey

The population survey is the general title given to the household sample survey which since February 1978 has been conducted monthly in all States and Territories. Although emphasis in the survey is placed on the regular collection of data on demographic and labour force characteristics of the population, supplementary and special surveys of particular aspects of the labour force or of other subjects are carried out from time to time. Statistics from supplementary surveys are released in publications which are available on request.

The survey is based on a multi-stage area sample of private dwellings (about 33,000 houses, flats, etc.) and non-private dwellings (hotels, motels, etc.), and covers about two-thirds of one per cent of the population of Australia. The information is obtained from the occupants of selected dwellings by carefully chosen and specially trained interviewers, the interviews generally being conducted during the two weeks beginning on the Monday between the 6th and 12th of each month. The information obtained relates to the week before the interview (i.e. the survey week).

The labour force survey

A description of the labour force survey and a selection of principal statistics obtained from it are given in this section. The first Australia-wide labour force survey was carried out in February 1964 and surveys were conducted quarterly until February 1978. Estimates are published in the monthly publications, *The Labour Force, Australia (Preliminary)* (6202.0) and *The Labour Force, Australia* (6203.0). Comprehensive statistics are published in annual publications entitled *The Labour Force, Australia* (6204.0), *Labour Statistics, Australia* (6101.0) and in *Employment, Unemployment and Underemployment—Trends 1966 to 1982* (6246.0).

Scope and definitions

The labour force survey includes all persons aged 15 and over except members of the permanent defence forces; certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations; overseas visitors holidaying in Australia; and members of non-Australian defence forces (and their dependents) stationed in Australia.

The labour force category to which a person is assigned depends on his actual activity (i.e. whether working, looking for work, etc.) during the survey week. This is determined from answers given to a set of questions designed for this purpose. For further information see *Information Paper: Questionnaires Used in the Labour Force Survey* (6232.0). The following definitions relate only to those persons within the scope of the survey.

Employed persons comprise all those aged 15 and over who, during the survey week:

(a) worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (including employees, employers and self-employed persons); or

(b) worked for 15 hours or more without pay in a family business or on a farm (i.e. unpaid family helpers); or

(c) were employees who had a job but were not at work and were: on paid leave; on leave without pay for less than four weeks up to the end of the survey week; stood down without pay because of bad weather or plant breakdown at their place of employment for less than four weeks up to the end of the survey week; on strike or locked out; on workers' compensation and expected to be returning to their job; or receiving wages or salary while undertaking full-time study; or

(d) were employers or self-employed persons who had a job, business or farm, but were not at work.

Unemployed persons are those aged 15 and over who were not employed during the survey week, and:

(a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and:

  (i) were available for work in the survey week, or would have been available except for temporary illness (i.e. lasting for less than four weeks to the end of the survey week); or

  (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or

(b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown.

The *labour force* comprises all persons who, during the survey week, were employed or unemployed, as defined above.

These definitions conform closely to the international standard definitions specified by the International Labour Organisation (ILO).

Population benchmarks

Labour force survey estimates of persons employed, unemployed and not in the labour force are calculated in such a way as to add up to the independently estimated distribution of the population aged 15 and over by age and sex. This procedure compensates for under-enumeration in the survey and leads to more reliable estimates. These independent population benchmarks are the latest available population estimates at the time the labour force survey is conducted, but they usually differ from the official population estimates subsequently published in the *Australian Demographic Statistics Quarterly* (3101.0) because they are necessarily derived from incomplete information about population changes.

Survey benchmarks and estimates are revised at intervals of about five years when population estimation bases are reviewed following each census of population and housing.

Comparison with population censuses

Estimates of labour force characteristics from the labour force surveys differ from estimates derived from the Censuses of Population and Housing for a number of reasons. They include the more detailed questions used in the labour force survey, and the fact that survey data is obtained by personal interview conducted by a trained interviewer. A much wider range of information is available from the labour force surveys, but for small areas the magnitude of the sampling variability in the survey estimates (see below) causes census data to be more useful. For statistics like numbers of employed and unemployed persons in Australia, which are published from both sources, the labour force survey statistics are the more reliable for most purposes.

Reliability of the estimates

Since the estimates in the following tables are based on information obtained from the occupants of a sample of dwellings, the estimates and the movements derived from them are subject to sampling variability; that is, they may differ from the figures that would have been produced if all dwellings had been included in the surveys. One measure of the likely difference is given by the *standard error*, which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included, and about nineteen chances in twenty that the difference will be less than two standard errors.

Space does not allow for the separate indication of the standard errors of all estimates in this section. A table of standard errors which is intended to be of general application is therefore given below.

An example of the use of the table is as follows: if the estimate for Australia obtained from the sample is 100,000, the standard error is 3,900; there are then about two chances in three that the true figure is within the range 96,100 to 103,900 and about nineteen chances in twenty that this figure is between 92,200 and 107,800.

STANDARD ERRORS OF ESTIMATES FOR AUSTRALIA

Size of estimate	*Number*	*Per cent of estimate*	*Size of estimate*	*Number*	*Per cent of estimate*
4,500	970	21.6	200,000	5,100	2.6
5,000	1,000	20.0	300,000	6,000	2.0
10,000	1,400	14.0	500,000	7,200	1.4
20,000	2,000	10.0	1,000,000	9,100	0.9
50,000	2,900	5.8	2,000,000	11,000	0.6
100,000	3,900	3.9	5,000,000	15,000	0.3

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the numerator and the size of the denominator. However, the per cent standard error of the estimated percentage will generally be lower than the per cent standard error of the estimate of the numerator. The per cent standard errors of the numerators can be obtained from the table above.

As the standard errors in the table above show, the smaller the estimate the higher is the relative standard error. Very small estimates are thus subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the following tables, estimates less than 4,500 have not been included. Although figures for these small components can in some cases be derived by subtraction, they should not be regarded as reliable.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to as the *non-sampling error*, and they may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

More detailed information is contained in the technical notes in *The Labour Force, Australia* (6203.0 and 6204.0)

LABOUR FORCE STATUS OF THE CIVILIAN POPULATION AGED 15 AND OVER(*a*)

May—	*Employed*		*Unemployed*							
	Full-time workers	*Total*	*Looking for full-time work*	*Looking for part-time work*	*Total*	*Labour force*	*Not in labour force*	*Civilian population aged 15 and over*	*Unemployment rate(b)*	*Participation rate(c)*
				—'000—					—*per cent*—	
				MALES						
1978 . .	3,668.1	3,863.5	194.8	14.4	209.1	4,072.6	1,087.2	5,159.8	5.1	78.9
1979 . .	3,698.8	3,908.3	197.7	13.0	210.6	4,118.9	1,132.4	5,251.3	5.1	78.4
1980 . .	3,781.6	3,981.2	201.0	18.9	219.9	4,201.1	1,140.6	5,341.6	5.2	78.6
1981 . .	3,842.8	4,064.2	175.5	17.3	192.9	4,257.1	1,190.7	5,447.8	4.5	78.1
1982 . .	3,836.5	4,066.9	219.8	20.0	239.8	4,306.8	1,256.7	5,563.4	5.6	77.4
1983 . .	3,686.8	3,932.7	413.4	22.6	436.0	4,368.7	1,320.5	5,689.2	10.0	76.8
				MARRIED FEMALES						
1978 . .	787.3	1,356.5	49.8	34.1	83.9	1,440.4	1,958.7	3,399.1	5.8	42.4
1979 . .	773.3	1,356.3	40.0	32.2	72.2	1,428.5	2,035.9	3,464.4	5.1	41.2
1980 . .	796.1	1,394.7	39.5	34.1	73.6	1,468.2	1,992.9	3,461.1	5.0	42.4
1981 . .	787.4	1,423.3	44.0	34.5	78.4	1,501.7	2,030.2	3,531.9	5.2	42.5
1982 . .	804.2	1,432.1	47.3	36.6	83.9	1,515.9	2,055.2	3,571.2	5.5	42.4
1983 . .	797.5	1,447.9	77.7	44.7	122.4	1,570.3	2,114.2	3,684.5	7.8	42.6
				ALL FEMALES						
1978 . .	1,415.8	2,135.3	136.8	49.3	186.2	2,321.4	2,964.5	5,285.9	8.0	43.9
1979 . .	1,392.7	2,135.0	137.5	48.5	186.0	2,321.0	3,061.3	5,382.3	8.0	43.1
1980 . .	1,492.1	2,256.6	141.6	52.1	193.7	2,450.3	3,027.2	5,477.5	7.9	44.7
1981 . .	1,492.2	2,313.0	132.1	50.5	182.6	2,495.6	3,089.8	5,585.4	7.3	44.7
1982 . .	1,520.3	2,337.9	152.8	57.2	210.0	2,547.9	3,152.0	5,699.9	8.2	44.7
1983 . .	1,491.4	2,328.9	212.6	70.0	282.5	2,611.4	3,212.0	5,823.4	10.8	44.8
				PERSONS						
1978 . .	5,083.9	5,998.7	331.6	63.7	395.3	6,394.0	4,051.7	10,445.7	6.2	61.2
1979 . .	5,091.5	6,043.3	335.1	61.4	396.6	6,439.9	4,193.6	10,633.5	6.2	60.6
1980 . .	5,273.7	6,237.8	342.6	71.0	413.6	6,651.4	4,167.7	10.819.1	6.2	61.5
1981 . .	5,335.0	6,377.2	307.7	67.8	375.5	6,752.7	4,280.5	11,033.2	5.6	61.2
1982 . .	5,356.8	6,404.8	372.6	77.3	449.9	6,854.7	4,408.7	11,263.3	6.6	60.9
1983 . .	5,178.2	6,261.6	626.0	92.6	718.6	6,980.1	4,532.5	11,512.7	10.3	60.6

(*a*) For definitions and scope of estimates *see* page 134. (*b*) The number unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (*c*) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group.

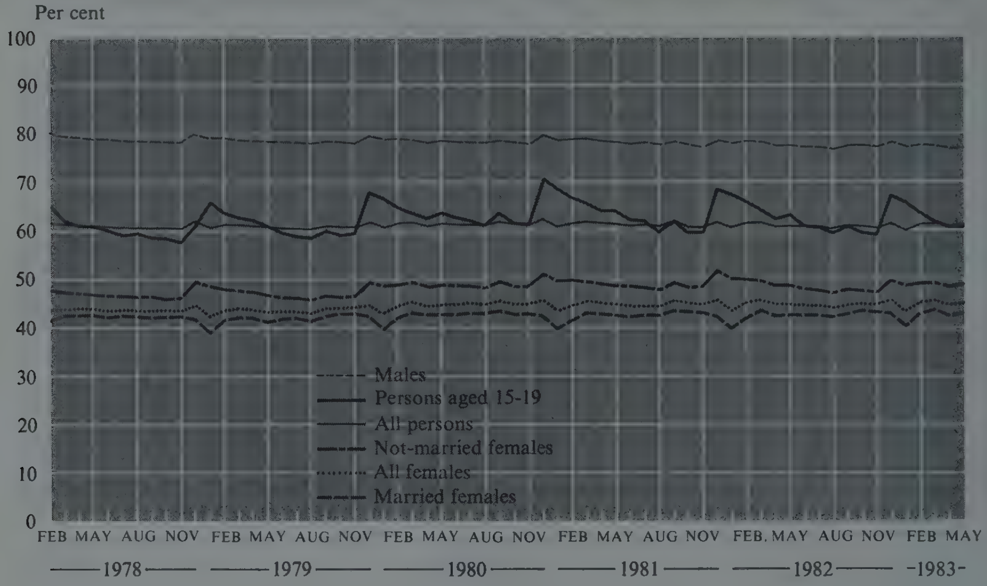
CIVILIAN LABOUR FORCE, BY BIRTHPLACE AND PERIOD OF ARRIVAL IN AUSTRALIA, MAY 1983

	Employed		*Unemployed*				
	Full-time workers	*Total*	*Looking for full-time work*	*Total*	*Labour force*	*Unemployment rate(a)*	*Participation rate(b)*
			—'000—			*—per cent—*	
MALES							
Born in Australia	2,685.4	2,874.5	277.6	292.7	3,167.3	9.2	77.5
Born outside Australia . .	1,001.4	1,058.1	135.8	143.3	1,201.5	11.9	78.3
Arrived before 1971 . .	713.2	752.1	77.5	81.5	833.6	9.8	76.5
1971–1975 . .	129.2	137.1	20.1	21.2	158.3	13.4	86.1
1976–1981 . .	130.3	138.3	26.4	27.9	166.2	16.8	82.9
Jan. 1982 to May 1983 .	28.7	30.7	11.8	12.6	43.3	29.2	73.2
MARRIED FEMALES							
Born in Australia	531.7	1,023.2	41.2	71.7	1,095.0	6.6	41.6
Born outside Australia . .	265.7	424.7	36.5	50.7	475.4	10.7	45.9
Arrived before 1971 . .	170.3	284.4	15.2	24.1	308.5	7.8	43.1
1971–1975 . .	43.3	65.6	6.7	8.8	74.5	11.9	54.7
1976–1981 . .	46.9	65.1	8.8	10.9	76.0	14.3	52.3
Jan. 1982 to May 1983 .	5.2	9.5	5.9	6.9	16.4	41.9	41.5
ALL FEMALES							
Born in Australia	1,104.9	1,757.3	145.9	197.2	1,954.5	10.1	45.6
Born outside Australia . .	386.5	571.6	66.6	85.4	657.0	13.0	46.1
Arrived before 1971 . .	238.3	368.2	30.6	41.4	409.5	10.1	42.3
1971–1975 . .	62.8	89.1	12.2	15.7	104.8	15.0	56.0
1976–1981 . .	73.1	96.6	15.5	18.8	115.5	16.3	54.5
Jan. 1982 to May 1983 .	12.3	17.7	8.3	9.5	27.2	34.8	46.5
PERSONS							
Born in Australia	3,790.3	4,631.8	423.5	489.9	5,121.7	9.6	61.2
Born outside Australia . .	1,387.9	1,629.7	202.4	228.7	1,858.4	12.3	62.8
Africa	50.2	60.3	6.2	7.1	67.4	10.5	66.1
America	37.4	42.8	6.9	8.6	51.3	16.7	69.2
Asia	167.8	194.9	37.9	42.9	237.8	18.0	60.3
Lebanon	18.0	21.6	8.3	8.7	30.3	28.8	52.0
Europe	1,036.7	1,218.6	133.9	151.4	1,370.1	11.1	62.2
Germany	54.1	66.0	8.3	9.1	75.1	12.1	68.9
Greece	74.1	84.8	11.9	13.6	98.5	13.9	67.0
Italy	156.4	177.4	13.5	15.2	192.7	7.9	61.3
Malta	27.9	32.9	*	*	35.6	*	66.1
Netherlands	44.5	53.5	4.9	6.3	59.9	10.6	61.7
Poland	23.1	27.3	4.7	5.5	32.8	16.8	49.4
U.K. and Ireland . .	482.9	578.7	59.9	67.2	645.9	10.4	61.5
Yugoslavia	80.4	88.1	13.3	14.5	102.6	14.1	68.2
Oceania	95.7	113.0	17.4	18.7	131.7	14.2	71.1
New Zealand . . .	83.1	97.7	15.4	16.4	114.1	14.4	73.3
Other	510.9	603.0	88.4	101.7	704.7	14.4	61.8
Arrived before 1971 . .	951.5	1,120.2	108.2	122.9	1,243.1	9.9	60.4
1971–1975 . .	192.0	226.1	32.4	36.9	263.1	14.0	70.9
1976–1981 . .	203.4	234.9	41.8	46.7	281.7	16.6	68.3
Jan. 1982 to May 1983 .	41.0	48.4	20.1	22.1	70.5	31.3	59.9

(*a*) The number unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (*b*) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group. Excludes persons in institutions.
* Subject to sampling variability too high for most practical uses. *See* page 135.

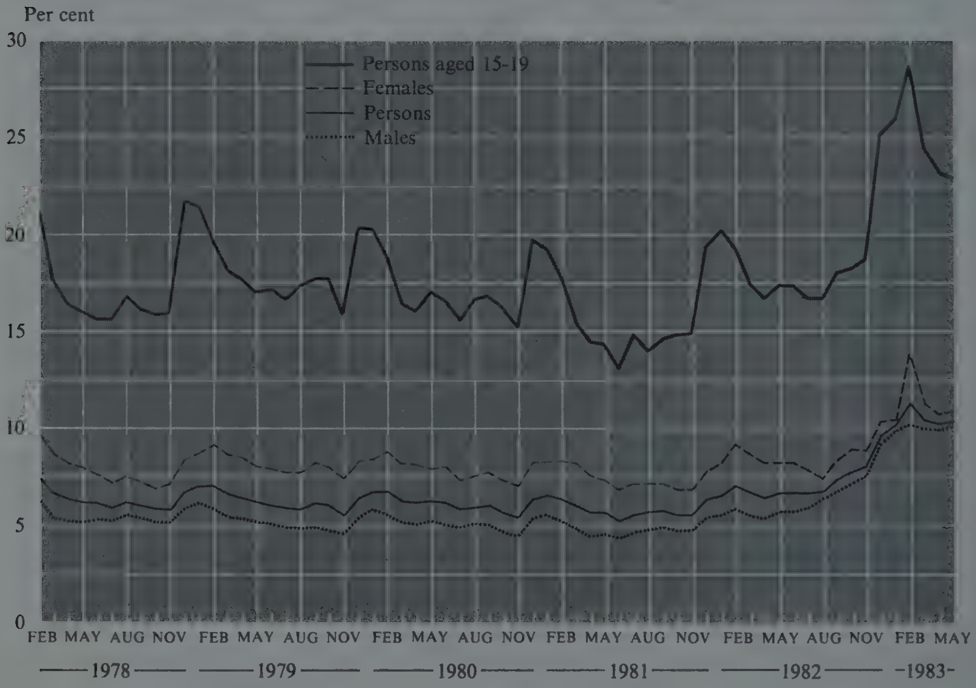
LABOUR FORCE PARTICIPATION RATES

(The labour force in each group as a percentage of the civilian population aged 15 and over in the same group)



UNEMPLOYMENT RATES

(The unemployed in each group as a percentage of the civilian labour force in the same group)



PLATES 30 and 31

CIVILIAN LABOUR FORCE, BY AGE, MAY 1983

	Number ('000)				*Participation rate (a) (per cent)*			
Age group	*Males*	*Married females*	*All females*	*Persons*	*Males*	*Married females*	*All females*	*Persons*
15–19	405.8	15.4	369.1	775.0	62.5	56.0	59.5	61.1
20–24	609.6	164.2	470.1	1,079.7	90.9	57.0	72.1	81.7
25–34	1,164.3	483.8	669.2	1,833.5	95.4	49.0	54.5	74.9
35–44	980.3	503.1	583.4	1,563.6	95.0	58.0	59.1	77.4
45–54	710.5	294.1	357.0	1,067.5	90.5	46.6	47.8	69.7
55–59	298.3	74.0	103.7	402.0	78.6	25.6	27.8	53.4
60–64	142.7	25.4	39.4	182.1	44.9	10.6	11.7	27.8
65 and over	57.3	10.3	19.5	76.7	9.0	2.9	2.2	5.1
Total	**4,368.7**	**1,570.3**	**2,611.4**	**6.980.1**	**76.8**	**42.6**	**44.8**	**60.6**

(*a*) The labour force expressed as a percentage of the civilian population aged 15 and over in the same group.

EMPLOYED PERSONS BY INDUSTRY AND AVERAGE WEEKLY HOURS WORKED(*a*), MAY 1983

	Number ('000)			*Average weekly hours worked*		
Industry	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Agriculture, forestry, fishing and hunting . .	312.8	102.6	415.4	48.1	29.3	43.4
Agriculture and services to agriculture . . .	289.5	99.2	388.6	48.9	29.3	43.9
Forestry and logging, fishing and hunting . .	23.3	*	26.8	38.6	27.7	37.2
Mining	89.7	7.5	97.2	35.9	34.3	35.8
Manufacturing	848.7	302.6	1,151.3	36.6	32.0	35.4
Food, beverages and tobacco	135.3	55.4	190.7	34.1	31.2	33.3
Metal products	174.6	23.8	198.3	36.5	29.6	35.7
Other manufacturing	538.8	223.4	762.2	37.3	32.5	35.9
Electricity, gas and water	129.9	12.9	142.8	35.1	31.8	34.8
Construction	372.2	46.5	418.7	36.4	19.6	36.7
Wholesale and retail trade	710.4	538.1	1,248.5	40.3	28.9	35.4
Wholesale trade	264.8	106.7	371.5	39.2	30.6	36.7
Retail trade	445.7	431.3	877.0	41.0	28.5	34.9
Transport and storage	300.7	55.4	356.1	37.8	30.3	36.6
Communication	99.7	33.4	133.1	33.4	29.5	32.4
Finance, property and business services . . .	309.9	264.4	574.3	38.9	30.3	34.9
Public administration and defence	202.8	98.1	301.0	35.3	29.4	33.4
Community services	380.2	649.7	1,030.0	35.7	27.4	30.5
Recreation, personal and other services . . .	175.6	217.8	393.3	40.4	26.6	32.7
Total	**3,932.7**	**2,328.9**	**6,261.6**	**38.3**	**28.8**	**34.8**

(*a*) Figures relate to hours worked, not hours paid for. The figures may be affected by public holidays, leave, absenteeism, absence from work due to sickness, injury, accident, industrial disputes, plant breakdown, etc. * Subject to sampling variability too high for most practical uses. *See* page 135.

EMPLOYED PERSONS BY OCCUPATION, MAY 1983
('000)

Occupation	*Males*	*Married females*	*All females*	*Persons*
Professional, technical, and related workers	506.5	257.9	429.6	936.1
Administrative, executive and managerial	360.7	47.0	64.3	425.0
Clerical	318.4	450.8	795.0	1,113.4
Sales	274.1	172.3	304.7	578.8
Farmers, fishermen, timber-getters, etc.	351.8	81.7	97.7	449.5
Transport and communication	283.4	30.7	44.6	328.0
Tradesmen, production-process workers and labourers, n.e.c.; and miners, quarrymen, etc.	1,602.6	156.5	219.2	1,821.9
Service, sport and recreation	235.3	251.1	373.7	609.0
Total	**3,932.7**	**1,447.9**	**2,328.9**	**6,261.6**

PART-TIME WORKERS: WHETHER PREFERRED TO WORK MORE HOURS AND WHETHER LOOKING FOR FULL-TIME WORK, BY AGE, MAY 1983
('000)

	Age group						
	15–19	*20–24*	*25–34*	*35–44*	*45–54*	*55 and over*	*Total*
				MALES			
Total	*68.5*	*32.2*	*41.5*	*30.4*	*23.1*	*50.2*	*245.9*
Preferred not to work more hours	46.1	18.3	22.7	18.8	14.2	44.3	164.5
Preferred to work more hours	22.4	13.9	18.9	11.5	8.9	5.8	81.4
Had actively looked for full-time work(*a*)	9.0	8.3	10.5	5.9	—4.7—		38.4
				MARRIED FEMALES			
Total	*	*33.7*	*199.9*	*235.4*	*125.7*	*52.6*	*650.5*
Preferred not to work more hours	*	25.4	172.7	199.5	115.7	48.6	563.8
Preferred to work more hours	*	8.4	27.2	35.9	10.0	*	86.6
Had actively looked for full-time work(*a*)	*	*	6.0	6.1	*	*	16.3
				ALL FEMALES			
Total	*93.0*	*69.9*	*220.1*	*249.2*	*137.1*	*68.2*	*837.5*
Preferred not to work more hours	60.3	48.3	187.2	208.7	124.9	62.1	691.5
Preferred to work more hours	32.7	21.6	32.9	40.5	12.2	6.1	146.0
Had actively looked for full-time work(*a*)	14.9	10.2	8.5	7.1	*	*	42.6
				PERSONS			
Total	**161.5**	**102.1**	**261.6**	**279.6**	**160.2**	**118.4**	**1,083.4**
Preferred not to work more hours	106.5	66.6	209.9	227.6	139.1	106.4	856.0
Preferred to work more hours	55.0	35.5	51.8	52.1	21.1	11.9	227.3
Had actively looked for full-time work(*a*)	23.9	18.5	19.0	13.0	4.8	*	81.0

(*a*) In the four weeks up to the end of the survey week. * Subject to sampling variability too high for most practical uses. *See* page 135.

EMPLOYED PERSONS, BY HOURS WORKED(*a*), MAY 1983
('000)

	Males	*Married females*	*Other females* (*b*)	*All females*	*Persons*
Weekly hours worked (*a*)—					
0(*c*)	266.9	116.6	50.7	167.3	434.2
1–15	135.4	310.0	109.6	419.6	555.0
16–29	238.0	266.2	89.1	355.2	593.2
30–34	404.3	142.0	92.1	234.1	638.4
35–39	652.1	194.1	175.1	369.3	1,021.4
40	1,018.8	262.1	248.5	510.6	1,529.4
41–44	213.6	36.8	44.4	81.2	294.8
45–48	287.5	35.9	33.3	69.3	356.8
49 and over	716.0	84.2	38.2	122.3	838.3
Total	**3,932.7**	**1,447.9**	**881.0**	**2,328.9**	**6,261.6**

(*a*) The figures relate to hours worked, not hours paid for. (*b*) Never married, widowed or divorced. (*c*) Persons who had a job from which they were absent for the whole of the survey week.

UNEMPLOYED PERSONS, BY INDUSTRY AND OCCUPATION OF LAST FULL-TIME JOB, MAY 1983

Industry division or subdivision	*Total ('000)*	*Unemployment rate(a) (per cent)*
Had worked full time for two weeks or more in the last two years	468.5	7.0
Agriculture and services to agriculture	23.8	5.8
Manufacturing	133.7	10.4
Food, beverages and tobacco	24.2	11.3
Metal products	27.9	12.3
Other manufacturing	81.7	9.7
Construction	64.6	13.4
Wholesale trade	29.4	7.3
Retail trade	74.5	7.8
Transport and storage	22.7	6.0
Finance, property and business services	22.4	3.8
Community services	28.3	2.7
Recreation, personal and other services	40.7	9.4
Other industries	28.4	3.9
Stood down(*b*)	10.0	..
Other(*c*)	240.1	..
Total	**718.6**	**10.3**

Occupation group	*Total ('000)*	*Unemployment rate(a) (per cent)*
Had worked full time for two weeks or more in the last two years	468.5	7.0
Professional, technical, etc.	23.4	2.4
Administrative, executive and managerial	8.7	2.0
Clerical	51.4	4.4
Sales	42.3	6.8
Farmers, fishermen, timber-getters, etc.	32.0	6.7
Miners, quarrymen, etc.	*	*
Transport and communication	25.4	7.2
Tradesmen, production-process workers and labourers, n.e.c.	231.0	11.5
Service, sport and recreation	51.8	7.8
Stood down(*b*)	10.0	..
Other(*c*)	240.1	..
Total	**718.6**	**10.3**

(*a*) The number unemployed expressed as a percentage of the labour force (i.e. employed and unemployed) in the same group. (*b*) Persons who were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown. (*c*) Had never worked for two weeks or more in a full-time job, or had not done so in the last two years. Industry and occupation were not obtained for these persons. * Subject to sampling variability too high for most practical uses. *See* page 135.

UNEMPLOYED PERSONS, BY AGE AND WHETHER LOOKING FOR FULL-TIME OR PART-TIME WORK, MAY 1983

	Number unemployed ('000)				*Unemployment rate (a) (per cent)*			
	Males	*Married females*	*All females*	*Persons*	*Males*	*Married females*	*All females*	*Persons*
LOOKING FOR FULL-TIME WORK								
Total	*413.4*	*77.7*	*212.6*	*626.0*	*10.1*	*8.9*	*12.5*	*10.8*
Aged 15-19	77.3	*	70.4	147.7	23.8	*	27.1	25.3
Attending school	5.4	*	*	9.3	n.a.	n.a.	n.a.	n.a.
Aged 20-24	104.6	13.4	49.8	154.4	18.2	10.7	12.7	16.0
Aged 25 and over	231.5	60.9	92.4	323.9	7.2	8.2	8.8	7.6
LOOKING FOR PART-TIME WORK								
Total	*22.6*	*44.7*	*70.0*	*92.6*	*8.4*	*6.4*	*7.7*	*7.9*
Aged 15-19	13.0	*	16.1	29.1	15.9	*	14.8	15.2
Attending school	9.6	*	10.7	20.3	20.1	*	20.7	20.4
Aged 20-24	*	5.2	9.2	12.7	*	13.3	11.7	11.1
Aged 25 and over	6.2	38.6	44.6	50.9	4.1	5.9	6.2	5.8
TOTAL								
Total	**436.0**	**122.4**	**282.5**	**718.6**	**10.0**	**7.8**	**10.8**	**10.3**
Aged 15-19	90.3	*	86.5	176.8	22.2	*	23.4	22.8
Attending school	15.0	*	14.6	29.6	27.5	*	25.6	26.5
Aged 20-24	108.1	18.6	59.0	167.1	17.7	11.3	12.5	15.5
Aged 25 and over	237.7	99.5	137.0	374.8	7.1	7.2	7.7	7.3

(*a*) See footnote (*a*) to table above.

UNEMPLOYED PERSONS, BY DURATION OF UNEMPLOYMENT(*a*), AND AGE, ETC., MAY 1983

Duration of unemployment (weeks)	*Age group*				*Total (b)*	*Married*	*Not married (c)*	*Looking for—*	
	15–19	*20–24*	*25–34*	*35–54*				*Full-time work*	*Part-time work*
MALES									
			—'000—						
Under 2	*	*	*	*	16.8	6.9	10.0	13.8	6.4
2 and under 4	8.3	8.0	7.7	8.0	34.0	13.8	20.2	30.6	
4 and under 8	9.4	8.7	12.0	11.6	44.3	21.7	22.6	41.2	6.4
8 and under 13	9.0	12.7	10.0	11.1	45.4	18.6	26.8	42.1	
13 and under 26	26.1	26.2	22.9	20.2	100.8	38.6	62.2	96.2	4.6
26 and under 39	12.1	19.8	14.8	16.3	69.7	30.4	39.3	67.3	5.2
39 and under 52	*	6.8	5.4	6.2	23.6	11.1	12.5	22.8	
52 and under 65	6.1	8.8	8.1	8.2	32.0	11.3	20.7	31.4	
65 and under 104	4.6	6.1	6.8	7.4	28.2	14.0	14.2	27.6	
104 and over	6.3	7.4	8.2	12.8	41.2	19.4	21.8	40.2	
Total	*90.3*	*108.1*	*99.6*	*105.9*	*436.0*	*185.7*	*250.3*	*413.4*	*22.6*
			—weeks—						
Mean duration	30.0	33.5	34.9	41.2	36.9	38.7	35.7	37.9	19.4
Median duration	20.1	22.0	22.0	22.1	22.0	22.0	22.0	22.1	12.0
FEMALES									
			—'000—						
Under 2	*	7.6	7.5	6.3	21.1	14.3	6.7	9.9	11.1
2 and under 4	8.2		6.9	4.7	24.7	10.8	13.9	15.7	9.0
4 and under 8	7.2	7.2	8.6	7.9	31.6	16.2	15.5	22.8	8.8
8 and under 13	9.3	5.7	8.1	7.6	30.9	13.7	17.2	22.0	8.9
13 and under 26	28.3	12.5	13.1	12.0	66.1	23.8	42.3	51.4	14.7
26 and under 39	10.7	6.9	7.2	7.0	32.1	13.2	18.9	27.3	4.8
39 and under 52	*	*	*	*	10.4	*	7.1	9.2	5.4
52 and under 65	5.1	5.8	5.2	4.9	20.9	9.6	11.3	16.7	
65 and under 104	6.3	*	*	*	16.6	4.9	11.7	14.4	*
104 and over	4.7	6.4	5.9	9.3	28.0	12.5	15.5	23.0	5.1
Total	*86.5*	*59.0*	*67.3*	*65.4*	*282.5*	*122.4*	*160.1*	*212.6*	*70.0*
			—weeks—						
Mean duration	29.0	39.3	31.8	41.8	35.5	33.5	37.0	39.3	23.8
Median duration	18.1	20.0	13.1	17.0	17.1	14.0	19.1	20.0	10.0
PERSONS									
			—'000—						
Under 2	7.8	6.7	11.1	10.5	37.9	21.2	16.7	23.7	14.2
2 and under 4	16.5	12.4	14.6	12.8	58.7	24.7	34.0	46.3	12.4
4 and under 8	16.7	15.9	20.5	19.5	75.9	37.9	38.0	64.0	11.9
8 and under 13	18.3	18.5	18.1	18.6	76.3	32.3	44.0	64.1	12.2
13 and under 26	54.5	38.7	36.0	32.2	166.9	62.4	104.6	147.7	19.3
26 and under 39	22.8	26.7	22.1	23.3	101.8	43.6	58.2	94.7	7.1
39 and under 52	7.1	10.1	7.4	8.0	34.0	14.5	19.6	32.1	*
52 and under 65	11.2	14.6	13.3	13.1	52.9	20.9	32.1	48.2	4.8
65 and under 104	10.9	9.6	9.5	11.4	44.8	18.9	26.0	42.1	*
104 and over	11.1	13.9	14.1	22.1	69.2	31.9	37.3	63.2	6.0
Total	**176.8**	**167.1**	**166.8**	**171.3**	**718.6**	**308.1**	**410.4**	**626.0**	**92.6**
			—weeks—						
Mean duration	29.5	35.5	33.7	41.4	36.4	36.6	36.2	38.4	22.7
Median duration	19.1	21.1	18.0	20.1	20.1	19.0	21.0	22.0	10.0

(*a*) Period from the time the person began looking for work, or was laid off, to the end of the survey week. Periods of unemployment are recorded in complete weeks and this results in a slight understatement of duration. (*b*) Includes persons aged 55 and over, details for whom are not shown separately. (*c*) Never married, widowed and divorced. * Subject to sampling variability too high for most practical uses. *See* page 135.

Government employees

Government employees comprise not only administrative employees but also all other employees of government bodies (Commonwealth, State, local and semi-government) on services such as railways, road transport, banks, postal and telecommunications, air transport, education (including universities, colleges of advanced education, etc.), radio, television, police, public works, factories, marketing authorities, public hospitals (other than those run by charitable or religious organisations) and departmental hospitals and institutions.

GOVERNMENT EMPLOYEES(*a*): JUNE 1983

(Excluding defence forces and employees in agriculture and services to agriculture)

('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Commonwealth									
Males	85.5	68.2	32.1	28.7	16.4	7.2	2.7	35.9	276.7
Females	41.7	29.5	15.7	8.5	7.9	2.5	1.4	25.4	132.5
Persons	127.2	97.7	47.7	37.2	24.3	9.7	4.1	61.3	409.2
State									
Males	192.7	158.3	99.8	53.1	62.7	20.1	..	..	586.6
Females	147.3	118.7	57.8	47.4	47.0	15.8	..	..	434.0
Persons	340.0	276.9	157.6	100.5	109.7	35.9	..	..	1,020.6
Northern Territory									
Males	..	..	..	..	..	..	7.7	..	7.7
Females	..	..	..	..	..	..	6.5	..	6.5
Persons	..	..	..	..	..	..	14.3	..	14.3
Local									
Males	49.4	21.3	20.5	5.3	7.4	2.7	0.5	..	107.1
Females	9.4	14.1	3.2	1.7	2.0	0.5	0.2	..	31.1
Persons	58.8	35.5	23.7	7.0	9.4	3.2	0.6	..	138.2
Total									
Males	**327.6**	**247.8**	**152.3**	**87.1**	**86.5**	**30.0**	**10.9**	35.9	**978.1**
Females	**198.4**	**162.3**	**76.6**	**57.6**	**56.9**	**18.8**	**8.1**	25.4	**604.1**
Persons	**525.9**	**410.1**	**229.0**	**144.7**	**143.5**	**48.8**	**19.0**	61.3	**1,582.2**

(*a*) Includes semi-government bodies.

Employees of Private Business

Publication of statistics of employees of private and government businesses estimated from a sample survey of business units, is expected to commence in respect of the September Quarter 1983.

Job Vacancies

Sample surveys of job vacancies were conducted by the ABS in March each year (by mail) from 1974 to 1978 and quarterly (by telephone) from May 1977 to May 1978. The annual and quarterly surveys were suspended in March and May 1978 respectively as part of the measures necessary to bring the activities of the ABS within the resources available to it at that time. The quarterly survey was re-introduced in May 1979.

A summary of the results of these surveys for the year to August 1983 is shown in the table below. Results of the resumed quarterly surveys are not directly comparable with those of surveys conducted up to May 1978, because of a change of the treatment of vacancies in the government sector. More detailed results and explanatory notes are published in *Job Vacancies, Australia* (6231.0).

	Number of vacancies ('000)					
	Private sector	*Government sector*	*Manu-facturing (a)*	*Other industries (b)*	*Total*	*Job vacancy rate (c) (per cent)*
1982—						
November	5.8	10.6	1.8	14.6	16.4	0.4
1983—						
February	7.2	9.8	2.1	14.9	16.9	0.4
May	8.1	9.5	2.2	15.4	17.5	0.5
August	6.9	9.9	2.9	13.8	16.7	0.4
Standard error of estimates and of quarterly movements			0.3	1.2	1.2	0.04

(*a*) Australian Standard Industrial Classification (ASIC) Division C. (b) ASIC Divisions A to L *excluding* Division C (Manufacturing), Subdivisions 01 and 02 (Agriculture, etc.), 94 (Private households employing staff) and defence forces. (*c*) The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of employees plus vacancies.

MINIMUM WAGE RATES AND EMPLOYMENT CONDITIONS

Industrial Conciliation and Arbitration

General

Legal minimum rates of pay for some 90 per cent of Australian wage and salary earners are prescribed in awards and determinations of Federal and State industrial tribunals or in collective agreements registered with them.

The main tribunals operative at the end of September 1983 were as follows.

- Federal: Australian Conciliation and Arbitration Commission, Public Service Arbitrator, Flight Crew Officers' Industrial Tribunal.
- Joint Federal and New South Wales: Coal Industry Tribunal.
- New South Wales: Industrial Commission of New South Wales, Public Service Board of New South Wales.
- Victoria: Industrial Relations Commission, Public Service Board, Teachers Tribunal, Police Service Board.
- Queensland: Industrial Conciliation and Arbitration Commission of Queensland.
- South Australia: Industrial Commission, Conciliation Committees, Public Service Arbitrator, Teachers Salaries Board.
- Western Australia: Western Australian Industrial Commission, Western Australian Coal Industry Tribunal, Public Service Arbitrator, Railway Classification Board, Government School Teachers Tribunal.
- Tasmania: Industrial Boards, Public Service Board, Public Service Arbitrator.

Federal Tribunals

The Australian Conciliation and Arbitration Commission has jurisdiction in respect of the prevention and settlement of industrial disputes extending beyond the limits of any one State. The Commission consists of a President, Deputy Presidents and Commissioners. The work of the Commission is normally done by individual members; however, certain matters such as standard hours, national wage cases, the minimum wage for adults, equal pay principles, annual leave and long service leave with pay must be determined by a Full Bench of the Commission consisting of at least three members, of whom not less than two are Presidential members. A Full Bench of the Commission also deals with appeals and references from single members of the Commission and from the Public Service Arbitrator. Where a State law or an award, etc. of a State Tribunal is inconsistent with a Federal award, etc., the latter prevails to the extent of the inconsistency.

Conditions of employment of Federal government employees are regulated by statutory provisions and by determinations of the Australian Public Service Arbitrator. Appeals and references may be made to the Australian Conciliation and Arbitration Commission.

The Flight Crew Officers' Industrial Tribunal is empowered to prevent and settle industrial disputes involving pilots, navigators and flight engineers of aircraft.

The Coal Industry Tribunal was established under the authority of Federal and New South Wales legislation, and is empowered to determine interstate and New South Wales disputes in the coal mining industry.

State Tribunals

State tribunals have jurisdiction over industrial disputes confined within their own State boundaries. For details of the composition and operation of the State tribunals listed above, reference should be made to the various State Year Books.

Determination of rates of pay

The awards, etc. of the various Federal and State tribunals prescribe minimum rates of pay, standard hours of work and other conditions of employment for particular occupations. Most awards also prescribe a minimum wage for adults, i.e., the minimum amount which must be paid to an adult employee, regardless of occupation, for working the standard weekly hours of work. The concept of equal pay for the sexes is applicable in most Federal and State awards. In recent years the wage fixing principles of the Australian Conciliation and Arbitration Commission have generally been followed by State tribunals.

In April 1975 the Commission introduced a set of wage determination principles which provided for quarterly (later half-yearly) adjustments to award wages in line with movements in the previous quarter's (half-year's) consumer price index, unless the Commission was persuaded not to grant such an increase. Other principles were designed to limit wage movements outside of indexation.

The main aims of this system were to contribute to a moderation in inflation and to reduce the degree of industrial disputation over wages matters.

Wage indexation continued up until 31 July 1981 when, after various expressions of misgivings and re-fashioning of principles, the Commission abandoned wage indexation saying in its reasons for decision: 'The events since April have shown clearly that the commitment of the participants to the system is not strong enough to sustain the requirements for its continued operation. The immediate manifestation of this is the high level of industrial action in various industries . . . (which) resulted in substantial increases being agreed without regard to the test of negligible wage cost'.

Since then claims for variations to wages and conditions were dealt with on a claim by claim basis until 22 December 1982 when, on economic grounds, the Commission imposed a pause on improvements in pay and conditions until 30 June and thereafter until altered or rescinded by a National Wage Bench. The pause was also adopted by all State wage fixing tribunals.

In June 1983 the Commission met to consider the formulation of new wage fixing principles in relation to the determining of national wage adjustments based on movements in the consumer price index.

On 23 September 1983, the Commission announced that on the basis of changed circumstances since July 1981, it would try once again to operate a centralised system based on prima facie full indexation. It awarded an increase of 4.3% (being the movement in the Consumer Price Index for the March and June 1983 quarters) effective from 6 October 1983, on condition that any award be varied only if every union party to that award gave a public and unequivocal commitment to the new Principles announced by the Commission. The majority of unions had given this commitment.

Under the new system, the Commission will adjust its award wages and salaries every six-months in relation to the last two quarterly movements of the CPI unless it is persuaded to the contrary. The Principles of the new system are to be reviewed after a period of two years.

For details of wage determination in earlier periods see previous issues of the Year Book, the Labour Report (last issue 1973) and the 1975-81 issues of Labour Statistics (6101.0).

Award Rates of Pay Indexes

This section contains indexes of minimum weekly and hourly award rates of pay for adult males and adult females.

The award rates of pay indexes replace the previously published series *Wage Rates, Australia* and are based on the occupation structure existing in May 1976. Based on a representative sample of award designations, the indexes are designed to measure trends in rates payable under awards. The base period chosen for the indexes is June 1976. Estimates of minimum award rates of pay for each component of the series are expressed as index numbers such that June 1976 = 100.0.

More detailed information including explanatory notes, definitions, etc. used in the indexes is contained in the monthly publication *Award Rates of Pay Indexes, Australia* (6312.0).

INDEXES OF WEEKLY AND HOURLY RATES OF PAY AUSTRALIA, ALL INDUSTRIES

Base: Weighted Average Minimum Weekly Award Rate June 1976 = 100.0

	Wage earners		*Wage and salary earners*
End of December	*Weekly rates*	*Hourly rates*	*Weekly rates*
ADULT MALES			
1976	104.3	104.3	104.3
1977	115.0	115.0	114.5
1978	124.2	124.3	123.3
1979	131.0	131.1	129.9
1980	145.7	145.8	144.8
1981	168.0	168.2	166.6
1982	186.7	190.3	184.8
ADULT FEMALES			
1976	104.5	104.5	104.3
1977	115.2	115.2	114.7
1978	123.8	123.8	123.2
1979	129.1	129.2	128.4
1980	145.5	145.5	144.6
1981	166.1	166.2	164.3
1982	184.5	185.9	183.3

INDEXES OF WEEKLY AWARD RATES OF PAY

AUSTRALIA, INDUSTRIES, WAGE AND SALARY EARNERS
Base: weighted average minimum weekly award rate, June 1976=100.0

	End of December—						
Industries	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*
ADULT MALES							
Mining*	104.2	114.7	123.3	130.6	143.9	167.9	180.4
Manufacturing—	104.4	115.0	124.8	132.1	146.6	170.3	187.6
Food, beverages and tobacco	104.2	114.9	123.2	128.9	143.7	164.5	183.3
Metal products, machinery and equipment	104.4	115.1	125.9	134.7	148.1	176.4	190.9
Basic metal products	104.8	115.6	125.3	132.9	146.2	168.3	182.4
Fabricated metal products, other machinery and equipment	104.4	115.2	127.8	137.2	150.9	181.3	196.5
Transport equipment	104.2	114.6	123.5	132.3	145.2	174.4	188.0
Other(*a*)	104.4	115.4	124.4	130.2	146.3	163.6	185.8
Electricity, gas and water	104.1	113.9	121.9	127.8	142.5	163.7	180.7
Construction	104.3	115.3	124.3	130.2	145.6	168.2	187.0
Wholesale trade	104.4	115.2	125.0	130.5	145.5	166.7	185.6
Retail trade	104.4	115.1	123.5	128.4	145.4	161.1	185.0
Transport and storage	104.1	114.0	123.4	130.2	144.0	167.2	182.1
Communication	103.9	113.4	121.2	130.4	142.9	165.0	189.5
Finance, property and business services	104.0	114.2	122.2	129.3	143.2	168.6	182.9
Public administration and defence(*b*)	104.0	112.9	120.5	125.5	141.5	162.7	179.4
Community services	104.4	113.3	121.1	127.8	143.7	161.1	182.5
Recreation, personal and other services	104.3	114.8	122.7	127.5	143.6	162.0	180.9
All industries(*c*)	**104.3**	**114.5**	**123.3**	**129.9**	**144.8**	**166.6**	**184.8**
All industries—Federal awards(*c*)(*d*)	**104.2**	**114.2**	**123.7**	**131.3**	**145.7**	**170.1**	**187.1**
All industries—State awards(*c*)(*d*)	**104.3**	**114.7**	**123.1**	**128.9**	**144.1**	**164.2**	**183.2**
ADULT FEMALES							
Manufacturing—	104.6	115.4	124.3	129.6	145.6	166.5	186.1
Food, beverages and tobacco	104.6	115.6	123.7	128.0	143.7	163.8	182.1
Textiles, clothing and footwear	104.5	115.6	123.7	127.6	144.6	161.8	186.1
Metal products, machinery and equipment	104.7	115.3	125.6	133.3	147.7	175.9	190.9
Other(*d*)	104.6	115.7	124.2	129.0	146.8	162.4	183.2
Wholesale trade	104.7	116.0	124.7	129.2	145.7	165.2	183.8
Retail trade	104.3	115.0	123.0	126.9	144.4	161.3	181.0
Transport and storage	104.1	114.2	123.6	128.5	143.6	166.3	180.8
Communication	104.0	113.8	121.5	128.1	140.7	169.4	180.6
Finance, property and business services	104.2	114.4	124.1	128.0	143.5	165.5	181.5
Public administration and defence(*b*)	104.0	113.9	122.0	127.1	143.2	164.8	178.7
Community services	104.2	113.8	122.0	128.0	144.4	162.3	185.5
Recreation, personal and other services	104.4	115.0	123.2	127.6	145.6	162.0	176.7
All industries(*c*)	**104.3**	**114.7**	**123.2**	**128.4**	**144.6**	**164.3**	**183.3**
All industries—Federal awards(*c*)(*d*)	**104.3**	**114.9**	**123.8**	**129.9**	**145.0**	**170.4**	**184.9**
All industries—State awards(*c*)(*d*)	**104.3**	**114.6**	**123.0**	**127.8**	**144.4**	**162.2**	**182.8**

* Indexes for mining can fluctuate due to variations in bonuses payable. (*a*) Includes ASIC sub-divisions 25, 28 and 34.. (*b*) Excludes employees in the Defence Forces. (*c*) Excludes employees in the Defence Forces, agriculture, services to agriculture and employees in private households employing staff. (*d*) Awards may change jurisdiction over time.

INDEXES OF WEEKLY AWARD RATES OF PAY AUSTRALIA, INDUSTRIES, WAGE EARNERS

Base: Weighted average minimum weekly award rate, June 1976=100.0

	End of December						
Industries	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*
ADULT MALES							
Mining*	104.2	114.8	123.5	131.1	143.9	167.3	179.5
Manufacturing—	104.4	115.2	125.1	132.6	147.0	171.0	188.5
Food, beverages & tobacco	104.2	114.9	123.3	129.1	143.8	164.5	183.5
Metal products, machinery & equipment	104.5	115.3	126.3	135.4	148.7	177.5	191.8
Basic metal products	104.9	115.7	125.5	133.3	146.7	168.4	182.8
Fabricated metal products, other machinery & equipment	104.5	115.4	128.5	138.4	151.8	183.8	198.5
Transport equipment	104.2	114.7	123.8	132.7	145.6	174.9	188.5
Other (*a*)	104.5	115.5	124.6	130.5	146.6	163.9	186.7
Electricity, gas & water	104.2	114.4	122.7	129.2	143.5	164.8	182.7
Construction	104.3	115.1	124.0	130.0	145.2	167.9	186.4
Wholesale trade	104.4	115.2	125.0	130.8	145.6	167.0	186.0
Retail trade	104.5	115.2	123.6	128.7	145.7	161.2	185.6
Transport & storage	104.2	114.4	123.9	131.1	144.7	168.9	183.9
Communication	103.9	113.5	121.3	131.5	143.5	162.0	195.7
Finance, property & business services	104.3	114.5	123.5	130.6	144.7	170.2	186.2
Public administration & defence (*b*)	104.3	114.8	122.9	127.4	143.5	162.5	183.1
Community services	104.4	115.0	123.4	129.3	144.4	167.9	189.6
Recreation, personal & other services,	104.4	115.3	123.3	127.9	144.2	162.3	183.0
All Industries (*c*)	104.3	115.0	124.2	131.0	145.7	168.0	186.7
ADULT FEMALES							
Manufacturing—	104.5	115.6	124.6	130.2	146.1	167.1	187.1
Food beverages & tobacco	104.7	115.8	124.0	128.4	144.1	163.9	182.5
Textiles, clothing & footwear	104.5	115.7	123.7	127.7	144.6	161.8	186.3
Metal products, machinery & equipment	104.5	115.6	126.6	135.1	148.8	178.8	193.6
Other (*a*)	104.5	115.4	124.0	129.0	147.2	161.9	183.1
Wholesale trade	104.8	116.3	125.3	130.0	146.0	166.4	185.1
Retail trade	104.2	114.9	122.9	126.9	144.3	161.6	180.9
Transport & storage	104.1	114.2	123.1	128.3	142.5	165.1	179.4
Communication	104.0	113.8	121.6	128.4	140.5	170.9	182.1
Finance, property & business services	104.2	114.4	122.5	127.7	143.6	165.7	181.1
Public administration & defence (*b*)	104.1	114.4	122.9	128.3	144.1	165.3	179.6
Community services	104.7	115.2	123.5	129.7	146.9	169.3	190.1
Recreation, personal & other services	104.5	115.3	123.5	127.9	146.0	161.6	176.6
All industries (*c*)	104.5	115.2	123.8	129.1	145.5	166.1	184.5

* Indexes for mining can fluctuate due to variations in bonuses payable. (*a*) Includes BASIC sub-divisions 25, 28 and 34. (*b*) Excludes employees in the defence forces. (*c*) Excludes employees in the defence forces, agriculture, services to agriculture and employees in private households employing staff.

Standard hours of work

In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work (excluding overtime) for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages shown below. The main features of the reduction of hours to forty-four, and later to forty, per week were summarised in previous issues of the Year Book. Since January 1948, practically all employees in Australia have had a standard working week of forty hours or less. However, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or States. The following table shows the weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and collective agreements for a full working week in respect of adult persons in all industries (excluding employees in the defence forces, agriculture, services to agriculture and employees in private households employing staff).

WEIGHTED AVERAGE STANDARD HOURS OF WORK
ADULT PERSONS, AUSTRALIA

	December 1982						
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust (a)*
Wage earners	39.18	39.05	39.39	39.23	39.33	39.28	39.18
Wage and salary earners	38.87	38.92	38.95	39.05	39.01	38.84	38.89

(*a*) Includes the Northern Territory and the Australian Capital Territory.

Working hours arrangements

During the period February to May 1981 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain information about the different types of working patterns of employed persons, such as evening and night work, shift work and weekend work. Results of this survey were published in *Working Hours Arrangements, Australia, February to May 1981* (6338.0) and *Working Hours Arrangement—Supplementary Tables, Australia, February to May 1981* (6339.0). A similar survey, of evening and night work and work patterns of employees, was conducted in November 1976. Results of this survey were published in *Evening and Night Work, November, 1976* (6329.0) and *Work Patterns of Employees, November 1976* (6328.0).

Alternative working arrangements

During the period March to May 1982 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain further information about working arrangements, such as the the incidence of permanent part-time work and the demand for reduced working hours and "tapered" and early retirement. Results were published in *Alternative Working Arrangements, Australia, March to May 1982* (6341.0).

Working conditions and employment benefits

During the period February to May 1979 a special survey based on a sample of private and non-private dwellings was conducted throughout Australia in order to obtain information about selected aspects of working conditions and a range of benefits provided by employers to employees. Results of these surveys were published in *Employment Benefits, Australia, February to May 1979* (6334.0) and *Working Conditions, Australia, February to May 1979* (6335.0). A further survey of a range of benefits provided by employers to employees was conducted in August 1983 and results were published in *Employment Benefits, Australia, August 1983* (6334.0).

SURVEYS OF EARNINGS AND HOURS

Average weekly earnings

Statistics of average weekly earnings are produced quarterly, and since the September quarter 1981 have been based on employment and earnings information obtained from a sample survey of employers. The sample is selected from the ABS Central Integrated Register, and includes approximately 3,500 government and private employers. The average weekly earnings statistics relate to earnings of employees in respect of a single pay period ending on or before a specific date near the middle of the quarter. If, for a particular survey respondent, that pay period was affected unduly by an industrial dispute, plant breakdown, fire, etc, particulars for the previous normal pay period were obtained.

Employees are all wage and salary earners except members of the Australian permanent defence forces, employees of establishments engaged primarily in agriculture, employees in private households employing staff, employees on workers compensation or based outside Australia, self-employed persons such as working proprietors of unincorporated businesses, and sub-contractors and owner/drivers.

Earnings are gross earnings in a pay period, before taxation and any other deductions such as superannuation, board and lodging, etc, have been made. Earnings comprise ordinary time earnings, overtime earnings, shift allowances, plus other allowances, payments, commissions, etc.

Ordinary time earnings refers to that part of total earnings attributable to award, standard or agreed hours of work.

Full-time employees are those who work the agreed or award hours for a full-time employee in their occupation and who received pay for any part of the pay period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 30 hours or more a week.

Adults are all employees 21 years of age or over, and employees under 21 years of age who are paid at the full adult rate for that occupation.

Statistics of average weekly earnings are published in the quarterly publication *Average Weekly Earnings, Australia* (6302.0). The current series replaces the average weekly earnings series based principally on information from payroll tax returns which was discontinued after the September quarter 1981. Background information on the reasons for the change from the payroll tax data to a direct collection is given in *Information Paper: Review of ABS Employment Statistics* (6239.0) published on 8 July 1981. A summary of the main differences in concepts, methods and coverage of the old and new earnings series is given in a further publication, *Information Paper: Average Weekly Earnings—New Series to Replace Former Payroll Tax Based Series* (6336.0), issued 24 March 1982.

AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA

		MALES			*FEMALES*			*PERSONS*		
		Full-time adults		*All males*	*Full-time adults*		*All females*	*Full-time adults*		*All employees*
Quarter	*Survey reference date*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*	*Weekly ordinary time earnings*	*Weekly total earnings*	*Weekly total earnings*
						—dollars—				
1981—										
September	14 August	287.20	311.20	286.60	234.80	240.90	194.70	271.40	289.90	252.20
December	23 October	300.00	327.50	299.40	243.40	250.30	197.30	283.20	304.40	260.80
1982—										
March	19 February	314.10	341.30	316.00	250.50	257.70	207.10	294.30	315.70	274.60
June	21 May	324.40	352.10	326.00	261.50	268.20	215.50	305.10	326.30	283.90
September	20 August	338.80	363.20	333.70	270.60	276.50	221.80	317.60	336.30	290.80
December	19 November	351.10	375.70	341.50	281.60	287.20	223.60	330.20	348.90	296.30
1983—										
March	18 February	355.30	375.70	345.00	285.90	291.30	230.30	334.10	349.90	301.40
June	20 May	358.30	380.50	347.30	286.80	293.30	231.80	336.30	353.60	303.00
September	19 August	362.00	385.40	353.80	288.90	295.00	233.40	339.10	357.10	306.90
Financial year—										
1981–82		306.40	333.00	307.00	247.60	254.30	203.70	288.50	309.10	267.90
1982–83		350.90	373.80	341.90	281.20	287.10	226.90	329.60	347.20	297.90

In the December quarter survey, additional information is collected relating to part-time and junior employees, managerial staff and hours of work. Detailed results of this survey are contained in *Earnings and Hours of Employees, Australia, November 1982* (6304.0).

Managerial employees are managerial, executive, professional and higher supervisory staff, i.e. employees who do not receive payment for overtime or who are in charge of a significant number of employees in a separate establishment. Non-managerial employees are those not managerial as defined.

Average weekly hours paid for refers to hours for which payment was made, and includes overtime hours, ordinary time hours, paid standby or reporting time, and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the reference period, i.e. hours for which employees are paid while on leave. For employees who began or ceased work, or were absent without pay for any reason during the reference period, the hours recorded will be less than their hours for a full week. For employees paid other than weekly (excluding managerial, executive, etc, staff whose hours are not required) hours are converted to a weekly basis. Agreed hours of work are recorded where they are less than award hours.

Since the estimates from the survey are based on information which, was obtained from samples of employers, they may differ from the figures that would have been produced if the information had been obtained from all employers. One measure of the likely difference is given by the *standard error* (for definition *see* page 135).

Relative standard errors for the published estimates of average weekly earnings and hours are generally less than 4 per cent.

FULL-TIME NON-MANAGERIAL EMPLOYEES: AVERAGE EARNINGS AND HOURS PAID FOR, INDUSTRIES, AUSTRALIA, NOVEMBER 1982

	Males			*Females*			*Persons*		
Industry	*Average weekly earnings*	*Average weekly hours paid for*	*Average hourly earnings*	*Average weekly earnings*	*Average weekly hours paid for*	*Average hourly earnings*	*Average weekly earnings*	*Average weekly hours paid for*	*Average hourly earnings*
	($)		($)	($)		($)	($)		($)
ADULT EMPLOYEES									
Mining	565.60	43.0	13.16	335.20	38.9	8.62	552.10	42.8	12.92
Manufacturing									
Food, beverages and tobacco	354.60	42.3	8.39	271.80	39.9	6.81	336.20	41.7	8.06
Textiles; clothing and footwear	301.20	42.7	7.05	238.30	38.7	6.16	255.70	39.8	6.43
Paper, printing, etc.	367.20	39.9	9.21	272.40	38.4	7.10	345.80	39.5	8.75
Chemical, petroleum and coal products	363.60	39.0	9.32	261.20	37.5	6.97	331.20	38.5	8.60
Metal products, machinery and equipment -									
Basic metal products	364.50	39.3	9.28	289.40	38.0	7.63	358.20	39.2	9.14
Fabricated metal products; other machinery, etc.	326.60	39.2	8.33	240.30	37.1	6.48	309.50	38.8	7.98
Transport equipment	312.90	38.0	8.23	254.80	37.4	6.81	307.10	38.0	8.09
Total metal products, etc.	*330.70*	*38.9*	*8.50*	*247.70*	*37.2*	*6.65*	*318.00*	*38.7*	*8.23*
Other manufacturing	312.50	40.6	7.71	244.80	38.9	6.29	300.30	40.3	7.46
Total manufacturing	*335.80*	*39.9*	*8.41*	*252.20*	*38.3*	*6.58*	*316.80*	*39.6*	*8.01*
Electricity, gas and water	387.90	39.4	9.86	299.00	37.2	8.04	381.20	39.2	9.73
Construction	362.50	40.9	8.87	252.50	37.9	6.67	353.80	40.6	8.71
Wholesale trade	315.80	40.9	7.72	266.10	39.4	6.75	302.90	40.5	7.48
Retail trade	277.20	40.5	6.84	234.40	39.5	5.93	259.80	40.3	6.45
Transport and storage; communication	374.30	40.5	9.25	321.50	39.2	8.20	366.80	40.3	9.11
Finance, business services	365.30	39.5	9.25	280.70	38.0	7.39	316.80	38.7	8.20
Public administration, community services, etc.	369.40	38.7	9.55	313.10	37.6	8.34	340.80	38.1	8.94
Other industries	305.10	40.3	7.58	233.30	38.7	6.02	270.60	39.5	6.85
Total all industries	**356.60**	**40.0**	**8.91**	**282.20**	**38.2**	**7.39**	**332.40**	**39.5**	**8.43**
JUNIOR EMPLOYEES									
Mining	298.70	38.2	7.82	272.00	39.3	6.92	291.60	38.5	7.57
Manufacturing--									
Food, beverages and tobacco	211.80	39.7	5.34	180.80	38.7	4.68	201.00	39.3	5.11
Textiles; clothing and footwear	182.50	38.8	4.71	162.20	39.2	4.14	166.20	39.1	4.25
Paper, printing, etc.	185.20	38.9	4.76	176.10	38.3	4.60	183.10	38.7	4.73
Chemical, petroleum and coal products	204.00	38.2	5.34	168.30	37.8	4.45	187.50	38.5	4.87
Metal products, machinery and equipment—									
Basic metal products	221.00	37.5	5.89	195.50	37.9	5.16	219.10	37.6	5.83
Fabricated metal products; other machinery, etc.	155.30	36.7	4.23	172.80	38.4	4.50	157.30	36.9	4.26
Transport equipment	169.20	37.7	4.49	161.20	37.9	4.26	168.60	37.7	4.47
Total metal products, etc.	*171.80*	*37.2*	*4.62*	*172.90*	*38.2*	*4.53*	*171.90*	*37.3*	*4.61*
Other manufacturing	148.50	39.3	3.78	154.90	38.8	3.99	149.40	39.2	3.81
Total manufacturing	*172.80*	*38.1*	*4.54*	*168.60*	*38.7*	*4.36*	*171.80*	*38.2*	*4.50*
Electricity, gas and water	209.00	37.5	5.57	206.50	37.0	5.59	208.40	37.4	5.57
Construction	189.80	38.0	5.00	178.60	38.4	4.65	188.60	38.0	4.96
Wholesale trade	176.00	41.0	4.29	156.90	39.2	4.00	167.50	40.2	4.17
Retail trade	153.30	39.7	3.86	162.80	40.1	4.07	157.60	40.0	3.94
Transport and storage; communication	218.50	38.0	5.76	194.80	38.6	5.05	209.90	38.2	5.50
Finance, business services	200.90	39.3	5.11	178.00	38.3	4.65	184.50	38.6	4.78
Public administration, community services, etc.	191.00	38.0	5.02	190.50	38.1	5.00	190.60	38.1	5.01
Other industries	185.40	40.2	4.61	146.40	39.1	3.75	159.80	39.5	4.05
Total all industries	**178.30**	**38.8**	**4.59**	**173.70**	**38.8**	**4.48**	**176.30**	**38.8**	**4.54**

Distribution and Composition of Earnings and Hours

Information on the distribution of earnings and hours is obtained from a regular survey of employers (conducted in May of each year from 1974 to 1981 inclusive), and a survey of households (conducted annually each August, from 1975 to 1982 inclusive). These statistics relate to estimates of the number of employees receiving particular levels of earnings, and paid for particular categories of hours.

Statistics of the composition of earnings are obtained from the survey of employers, conducted annually from May 1974 to May 1981 inclusive, and show average weekly earnings at award rates, payment by measured result (incentive payments, piecework, task bonus, commission, etc.), other ordinary time pay (over-award pay) and overtime pay. Other information published includes average earnings and hours classified by industry and by occupation. In this survey, a sample of employers is selected, and each requested to supply dissected earnings and hours information for individual

FULL-TIME EMPLOYEES: WEEKLY EARNINGS IN ALL JOBS AND AGE, AUSTRALIA, AUGUST 1983

	Age group (years)								
	15-19	*20-24*	*25-34*	*35-44*	*45-54*	*55-59*	*60 and over*	*Total 20 and over*	*Total*
					MALES				
Weekly earnings ($)—					—'000—				
Under 120	40.5	9.2	10.2	8.3	4.1	6.6	4.3	35.0	75.5
120 and under 160	59.8	15.6	10.7	7.4	5.8			43.4	103.1
160 " 180	29.8	20.4	9.2	9.3	7.5			50.3	80.1
180 " 220	39.6	53.9	42.5	26.2	23.1	12.1	5.4	163.2	202.8
220 " 240	14.0	54.4	53.7	39.7	35.9	17.2	7.3	208.1	222.1
240 " 280	14.0	105.1	142.9	99.2	76.5	35.6	21.3	480.6	494.6
280 " 320	6.1	67.6	147.1	102.7	83.0	36.2	14.7	451.2	457.3
320 " 380	4.9	52.4	155.9	115.3	85.2	34.1	14.6	457.6	462.5
380 " 420		21.3	96.1	76.7	45.9	18.1	7.4	265.5	267.0
420 " 480		13.2	79.5	60.0	41.3	10.5	6.0	210.5	211.4
480 " 520	4.2	5.2	47.3	46.8	24.4	9.8	6.6	136.3	136.9
520 " 580		5.4	37.2	54.1	24.1	11.2		135.9	136.5
580 and over		6.7	39.1	54.9	38.9	15.1	3.7	158.4	159.0
Total	**212.9**	**430.4**	**871.5**	**700.6**	**495.9**	**206.5**	**91.2**	**2,796.0**	**3,008.9**
					—dollars—				
Median earnings	164	263	327	350	328	315	300	317	309
Mean earnings	177	283	356	382	368	364	341	353	341
Standard error of mean	2.60	2.70	2.10	2.60	3.20	5.50	8.50	0.90	0.90
					FEMALES				
Weekly earnings ($)—					—'000—				
Under 120	34.8	6.4	5.7	8.3	3.8	4.6	4.9	28.1	62.9
120 " 160	68.2	15.0	8.8	8.7	5.7			40.1	108.3
160 " 180	28.1	22.5	11.1	10.1	6.9			54.3	82.4
180 " 220	26.9	59.9	31.3	28.0	20.3	7.2	4.2	149.0	176.0
220 " 240	8.3	62.2	36.1	27.7	22.3	5.7		155.8	164.1
240 " 280	6.5	87.1	77.5	48.3	37.9	10.8	3.2	264.7	271.3
280 " 320	3.1	36.5	53.1	38.2	24.4	6.5		160.6	163.7
320 " 380		29.7	50.8	27.5	16.2	4.1		129.8	130.5
380 " 420	3.2	5.6	28.0	18.4	6.1	6.5	5.1	60.4	60.8
420 and over		9.8	36.8	27.9	18.1			98.6	100.7
Total	**179.1**	**334.7**	**339.2**	**243.1**	**161.9**	**45.3**	**17.4**	**1,141.5**	**1,320.6**
					—dollars—				
Median earnings	152	241	280	272	263	259	236	262	250
Mean earnings	166	253	304	293	289	284	245	283	267
Standard error of mean	2.70	2.80	3.40	4.00	5.10	10.60	15.60	1.40	1.20

employees selected randomly in accordance with instructions provided by the ABS. The survey covered stratified random samples of government departments and authorities, non-government hospitals not subject to payroll tax and other private employers subject to payroll tax.

Detailed statistics from this survey were published in *Earnings and Hours of Employees, (Distribution and Composition), Australia, May 1981 (6306.0)*, and some tables relating to the May 1981 survey were published in the 1983 Yearbook. The survey was not conducted in 1982. From May 1983, the sample will be selected from the ABS Central Integrated Register and it is expected that the survey will be conducted biennially thereafter.

The other source of earnings distribution statistics, the household-based population survey, provides information classified by various demographic and labour force characteristics such as marital status, country of birth and age group. This survey covers all persons aged 15 years and over who were employed as wage and salary earners in their main job. Detailed results of this survey are contained in *Weekly Earnings of Employees (Distribution), Australia, August 1983 (6310.0)*. A *full-time employee* in this survey is defined as one who usually works 35 hours or more per week, or who worked 35 hours or more in the reference week for the survey. Since the estimates from the survey are based on information which was obtained from a sample of households, they may differ from the figures that would have been produced if the information had been obtained from all households. One measure of the likely difference is given by the *standard error* (see page 135).

ALL EMPLOYEES: WEEKLY EARNINGS IN ALL JOBS, MARITAL STATUS AND FULL-TIME OR PART-TIME STATUS, AUSTRALIA, AUGUST 1982

	Males			*Females*		
	Married(a)	*Not married(b)*	*Total*	*Married(a)*	*Not married(b)*	*Total*
FULL-TIME EMPLOYEES						
			—'000—			
Weekly earnings ($)—						
Under 100	12.3	31.8	44.1	13.0	23.9	36.9
100 and under 110	6.6	19.6	26.2	8.4	17.9	22.2
110 " 120	4.5	19.4	23.9		18.2	22.3
120 " 130	7.5	26.6	34.1	6.9	27.1	34.0
130 " 140	5.4	22.9	28.3	9.3	21.6	25.4
140 " 150	7.0	22.5	29.5		23.5	29.0
150 " 160	12.0	31.1	43.1	13.1	24.3	37.4
160 " 170	14.2	25.9	40.0	14.0	27.2	41.2
170 " 180	20.0	29.2	49.2	15.6	25.3	40.9
180 " 190	26.1	33.3	59.4	27.4	27.7	55.1
190 " 200	28.7	28.5	57.2	25.3	27.6	52.8
200 " 210	67.6	47.4	114.9	47.6	43.5	91.1
210 " 220	55.1	39.8	94.8	41.7	34.9	76.6
220 " 230	85.8	47.3	133.1	46.8	37.1	83.9
230 " 240	76.0	39.3	115.2	42.1	31.0	73.1
240 " 250	82.1	49.4	131.5	43.2	30.4	73.6
250 " 260	120.4	48.8	169.1	50.8	36.4	87.2
260 " 280	147.9	59.8	207.7	60.0	41.8	101.8
280 " 300	156.9	62.6	219.5	44.8	28.9	73.7
300 " 320	199.2	58.8	258.0	34.2	28.0	62.2
320 " 340	124.6	38.9	163.5	23.9	18.9	42.8
340 " 360	115.2	38.3	153.5	20.1	13.6	33.7
360 " 380	97.5	26.5	124.1	15.1	12.1	27.2
380 " 400	91.2	25.2	116.4	16.0	10.1	26.0
400 " 450	162.7	34.1	196.8	23.8	16.3	40.0
450 " 500	112.3	22.1	134.3	7.7	5.8	13.6
500 " 550	90.5	13.1	103.6	7.4	5.9	13.3
550 " 600	63.1	9.5	72.6			
600 and over	129.0	21.8	150.7	7.1	7.2	14.3
Total	**2,121.3**	**973.2**	**3,094.5**	**665.2**	**666.1**	**1,331.3**
			—dollars—			
Median earnings	313	245	293	245	217	232
Mean earnings	348	264	322	260	230	245

ALL EMPLOYEES: WEEKLY EARNINGS IN ALL JOBS, MARITAL STATUS AND FULL-TIME OR PART-TIME STATUS, AUSTRALIA, AUGUST 1982—*continued*

	Males			*Females*		
	Married(a)	*Not married(b)*	*Total*	*Married(a)*	*Not married(b)*	*Total*
			PART-TIME EMPLOYEES(*c*)			
			—'000—			
Weekly earnings ($)—						
Under 40	5.7	51.7	57.4	41.9	68.0	109.9
40 and under 60	8.5	9.6	13.4	39.1	21.2	60.3
60 „ 80		7.5	9.7	49.6	13.1	62.7
80 „ 100		6.9	9.3	51.9	11.5	63.5
100 „ 120	7.1	7.2	11.5	67.9	11.4	79.4
120 „ 140		4.9	7.7	55.8	11.9	67.7
140 „ 160	7.3	5.1	8.0	48.1	10.7	58.8
160 „ 180			4.5	38.4	7.6	46.0
180 „ 200	*	5.3	6.3	25.9	5.3	31.2
200 and over	30.9	14.8	45.7	75.3	19.4	94.7
Total	**60.6**	**112.9**	**173.5**	**494.1**	**180.1**	**674.2**
			—dollars—			
Median earnings	203	50	93	119	61	109
Mean earnings	228	96	142	131	91	120

(*a*) Includes permanently separated and de facto relationships. (*b*) Never married, widowed and divorced. (*c*) Since part-time employees are defined as those who usually work less than 35 hours and who did so during the survey week, these figures may include school teachers, academic staff in universities, aircrew, etc.

Overtime

From July 1979 to June 1981 the ABS conducted a monthly sample survey of employers, by telephone, to obtain information about overtime hours worked by employees. In this two year period the survey did not show sufficient month-to-month variation to warrant its continuation as a monthly collection therefore, the survey, since August 1981, has been conducted quarterly, in August, November, February and May of each year. The survey is generally conducted in respect of the last pay period ending on or before the third Friday of each survey month.

A summary of the results of the surveys for the year to August 1983 is shown below. More detailed information and explanatory notes are published in *Overtime, Australia* (6330.0).

	Average weekly overtime hours								
Month	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
				PER EMPLOYEE IN THE SURVEY					
1982—									
November	1.35	1.29	1.27	0.94	1.69	1.01	1.58	0.80	1.30
1983—									
February	1.12	1.23	1.05	0.89	1.38	1.17	1.77	0.66	1.14
May	1.06	1.32	1.23	1.11	1.40	1.14	1.53	0.80	1.19
August	1.15	1.39	1.10	0.90	1.36	1.00	1.96	0.75	1.20
Standard error of August 1983 estimates	0.07	0.10	0.11	0.09	0.08	0.10	0.17	0.03	0.04
				PER EMPLOYEE WORKING OVERTIME					
1982—									
November	7.01	7.25	6.27	6.42	8.13	6.70	7.09	7.20	7.03
1983—									
February	6.56	7.37	5.93	6.45	7.19	7.55	8.35	6.01	6.78
May	6.51	7.26	6.65	7.01	7.02	6.68	7.33	6.58	6.85
August	6.60	7.64	5.99	5.80	7.13	6.53	8.21	5.92	6.80
Standard error of August 1983 estimates	0.19	0.30	0.34	0.34	0.22	0.33	0.34	0.16	0.12

Average weekly overtime hours—continued

Month	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
PROPORTION OF EMPLOYEES IN THE SURVEY WORKING OVERTIME (per cent)									
1982—									
November	19.27	17.74	20.35	14.58	20.75	15.04	22.33	11.14	18.44
1983—									
February	17.04	16.74	17.78	13.80	19.26	15.51	21.26	11.02	16.82
May	16.36	18.18	18.50	15.81	19.89	17.00	20.89	12.12	17.36
August	17.36	18.20	18.37	15.46	19.03	15.38	23.92	12.62	17.59
Standard error of August 1983 estimates	0.69	0.85	1.00	0.70	0.71	0.87	1.85	0.63	0.59

INCOME DISTRIBUTION SURVEYS

A number of surveys of incomes has been conducted at irregular intervals. These surveys are conducted throughout Australia and cover all persons aged 15 years and over. Estimates are usually presented for individuals, and groups of individuals such as income units and families.

The last survey for which full results are available was conducted in respect of 1978-79; these were published in Income Distribution, Australia, 1978-79, Unemployed Persons (6521.0); Individuals (6502.0); Income Units (6523.0) and Supplementary Tables (6504.0), the last of which contains tables for individuals, income units and families. A more analytical presentation of these results is contained in Income Distribution, Australia, 1978-79, Supplement to Social Indicators No. 3 (4108.0).

Annual leave and long service leave

The majority of employees in Australia at present receive four weeks paid annual leave.

Four weeks annual leave was granted to State government employees in New South Wales in 1964, in South Australia in 1971 and in Tasmania in October 1972. Australian Government employees received the entitlement in 1973, as did State Government employees in Victoria, Queensland and Western Australia. (Northern Territory Government employees are entitled to four weeks annual leave.)

In December 1973, Queensland day workers employed under State awards were granted four weeks paid annual leave. Subsequently, workers covered by State awards in other States were granted similar benefits.

In May 1974, the Australian Conciliation and Arbitration Commission granted four weeks paid annual leave to persons employed under the Metal Industry Award, to accrue from 1 January 1974. As a result, this benefit was extended to other Federal awards. In addition to the leave entitlement, workers also received a leave bonus which varies in amount (but a 17½ per cent addition to leave pay is a frequent provision in awards).

Paid long service leave, i.e. leave granted to workers who remain with the one employer or in the same industry over an extended period of time, has been included in the provisions of Federal and State industrial legislation and industrial awards. Most employees in Australia are now entitled to at least thirteen weeks paid long service leave after fifteen years continuous employment with the one employer. For employees in certain industries and for some employees of the Australian and State Governments, long service leave entitlements are more generous. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer.

In May 1979, a survey based on the monthly population survey (*see* the section *The Population Survey* earlier in this chapter) was conducted throughout Australia in order to obtain information about the incidence and extent of annual and long-service leave-taking within Australia. Results of this survey were published in *Annual and Long-service Leave, May 1979* (6317.0).

INDUSTRIAL DISPUTES

The tables in this section refer to disputes involving stoppages of work of ten man-days or more: statistics of persons affected at establishments other than those at which the stoppages occurred are *not* included.

The statistics are compiled according to the Australian Standard Industrial Classification (ASIC), described in the ABS publication *Australian Standard Industrial Classification,*1978, Vol. 1 (1201.0).

Detailed information, including explanatory notes, definitions, etc. on industrial disputes involving stoppages of work, is given in the annual publication *Labour Statistics, Australia* (6101.0). A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 58, 1973. Current statistics are published in the monthly publication *Industrial Disputes, Australia* (6321.0). Quarterly and annual figures are published in *Industrial Disputes, Australia* (6322.0).

The annual figures contained in tables on this page and pages 157, 158 and 160 relate to disputes *in progress* in the year, whilst figures in tables on page 159 relate only to disputes which *ended* in the reference year.

INDUSTRIAL DISPUTES: INDUSTRIES, 1978 TO 1982

	Mining		*Manufacturing*			*Transport and storage; Communication*			
Year	*Coal*	*Other*	*Metal products, machinery and equipment*	*Other*	*Construction*	*Stevedoring services*	*Other*	*Other industries (a)*	*All industries*
NUMBER OF DISPUTES									
1978 . .	287	238	584	355	178	161	192	282	2,277
1979 . .	256	221	598	266	136	94	176	295	2,042
1980 . .	260	353	709	240	186	116	204	361	2,429
1981 . .	354	332	950	285	247	94	269	384	2,915
1982 . .	223	408	541	179	251	77	141	240	2,060
WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)									
1978 . .	52.3	45.3	465.3	163.9	57.1	65.2	100.0	126.3	1,075.6
1979 . .	107.9	58.2	395.6	276.3	134.4	48.4	201.6	639.1	1,862.9
1980 . .	79.7	49.6	322.1	153.0	60.0	35.5	100.8	372.1	1,172.8
1981 . .	98.8	60.0	322.4	207.6	136.2	30.9	130.9	265.0	1,251.8
1982 . .	104.3	55.7	162.7	92.9	71.6	19.9	64.8	151.1	722.9
WORKING DAYS LOST ('000)									
1978 . .	142.3	125.1	732.1	490.2	134.1	122.9	166.9	217.2	2,130.8
1979 . .	232.6	283.6	929.7	749.0	359.7	114.3	435.8	859.7	3,964.4
1980 . .	710.7	197.7	615.9	728.4	217.9	73.4	142.5	633.7	3,320.2
1981 . .	318.3	307.4	1,221.5	654.1	441.9	59.3	406.2	783.3	4,192.2
1982 . .	525.8	157.1	241.8	333.0	231.1	21.6	274.6	373.1	2,158.0
ESTIMATED LOSS IN WAGES ($'000)									
1978 . .	7,228	5,513	24,988	17,396	5,345	4,331	5,806	7,796	78,404
1979 . .	10,370	12,634	32,860	26,993	13,700	4,266	15,791	32,000	148,614
1980 . .	39,270	10,287	25,804	31,087	10,898	2,970	5,883	25,823	152,022
1981 . .	21,321	19,366	60,576	34,658	25,312	3,188	19,044	38,315	221,779
1982 . .	34,022	10,049	14,682	18,871	18,103	1,198	14,602	22,097	133,624

(*a*) ASIC divisions A, D, F, I to L.

INDUSTRIAL DISPUTES: WORKING DAYS LOST, INDUSTRIES
('000)

ASIC division	*ASIC industry*	*1980*	*1981*	*1982*
A	Agriculture, forestry, fishing and hunting	4.5	21.0	100.6
B	Mining	908.5	625.8	682.9
	Coal mining	710.7	318.3	525.8
	Other mining	197.7	307.4	157.1
C	Manufacturing	1,344.3	1,875.7	574.7
	Food, beverages and tobacco	494.9	198.5	250.2
	Textiles; clothing and footwear	11.4	67.9	3.1
	Textiles	3.7	15.6	2.6
	Clothing and footwear	7.7	52.4	0.5
	Wood, wood products and furniture	6.3	14.5	6.6
	Paper and paper products, printing and publishing	109.9	240.1	27.2
	Chemical, petroleum and coal products	58.9	40.0	17.6
	Metal products, machinery and equipment	615.9	1,221.5	241.8
	Basic metal products	156.4	273.5	91.2
	Fabricated metal products	74.8	138.3	19.5
	Transport equipment	264.4	523.6	98.7
	Other machinery and equipment	120.3	286.1	32.3
	Other manufacturing	47.1	93.1	28.3
	Non-metallic mineral products	18.3	53.2	19.6
	Miscellaneous manufacturing	28.8	39.9	8.7
D	Electricity, gas and water	98.6	105.9	61.9
	Electricity and gas	58.8	83.4	28.4
	Water, sewerage and drainage	39.8	22.4	33.5
E	Construction	217.9	441.9	231.1
F	Wholesale and retail trade	184.5	158.2	45.8
	Wholesale trade	106.1	93.6	9.4
	Retail trade	78.4	64.6	36.4
G,H	Transport and storage; communication	215.9	465.5	296.2
	Railway transport; Air transport	103.3	109.6	220.5
	Railway transport	84.5	38.1	218.5
	Air transport	18.9	71.5	2.0
	Water transport	85.1	90.9	32.5
	Stevedoring services	73.4	59.3	21.6
	Water transport (except stevedoring services)	11.7	31.6	10.9
	Road transport; other transport and storage; communication	27.5	264.9	43.2
	Road transport	20.3	152.9	32.9
	Other transport and storage; communication	3.4	112.1	10.2
I	Finance, insurance, real estate and business services	12.1	13.1	54.0
J,K	Public administration and defence; community services	236.0	383.2	102.4
	Health	9.6	32.7	38.2
	Education, libraries, museums and art galleries	81.4	183.0	14.5
	Other	144.9	167.5	49.8
L	Entertainment, recreation, restaurants, hotels and personal services	98.0	102.0	8.4
	Total	**3320.2**	**4,192.2**	**2158.0**

INDUSTRIAL DISPUTES : AUSTRALIA

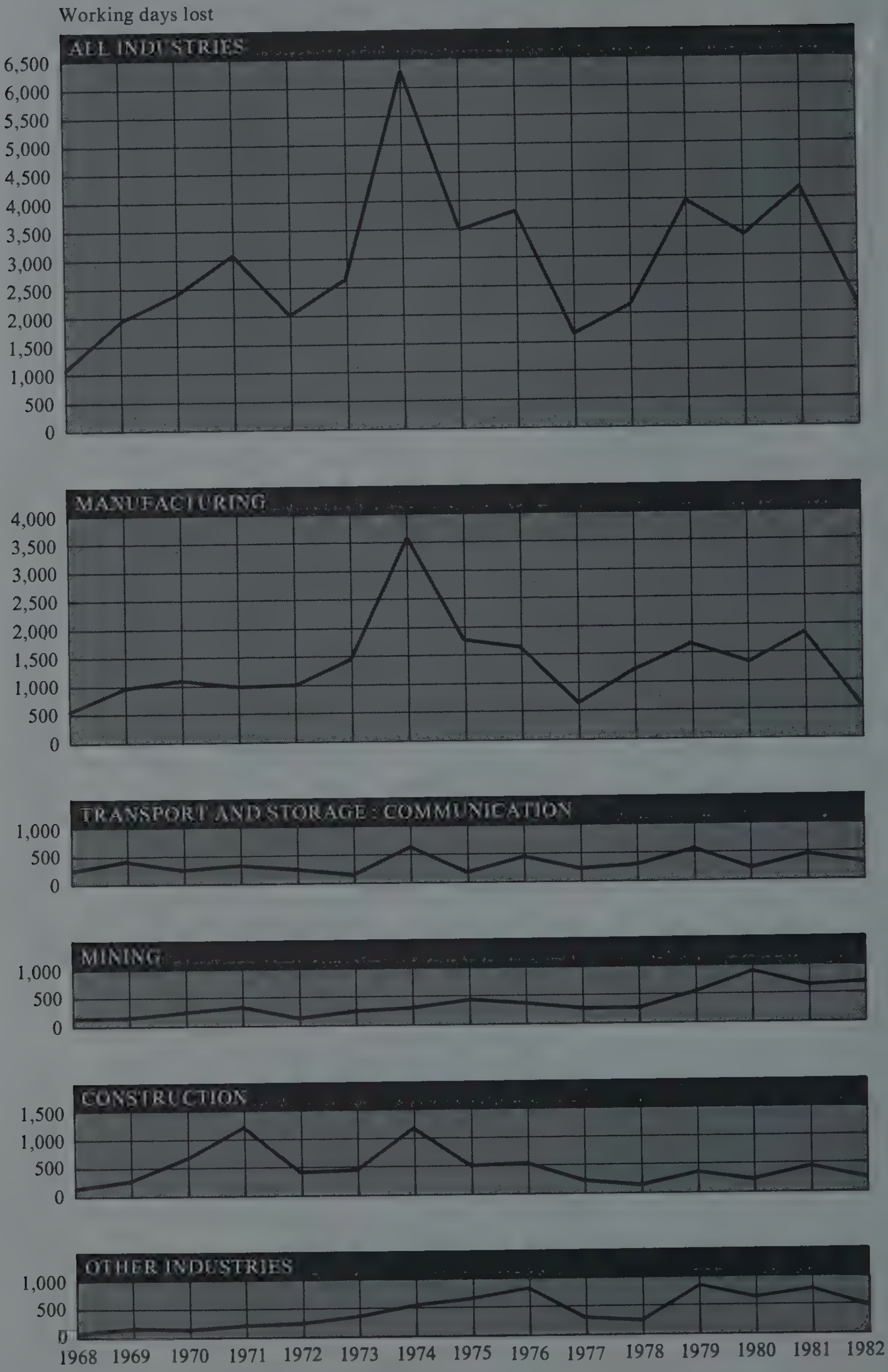


PLATE 32

The following table shows, for the years 1980 to 1982, working days lost in industrial disputes which ended in those years, classified according to duration, causes and methods of settlement. Causes (i.e. the direct causes of stoppages of work) are grouped as follows:

> *Wages*—claims involving general principles relating to wages, including combined claims relating to wages, hours or conditions of work. *Hours of work*—claims involving general principles relating to hours of work. *Leave, pensions, compensation provisions, etc.*—claims involving general principles relating to these provisions. *Managerial policy*—disputes concerning managerial policy of employers including computation of wages, hours, leave, etc. in individual cases; docking pay, etc.; dismissals, etc.; principles of promotion, etc.; employment of particular persons and personal disagreements; production limitations, etc. *Physical working conditions*—disputes concerning physical working conditions including safety issues; protective clothing and equipment, etc.; amenities; shortage of, or condition of, equipment or material; new production methods, etc.; arduous physical tasks, etc. *Trade unionism*—disputes concerning employment of non-unionists; inter-union and intra-union disputes; sympathy stoppages; recognition of union activities, etc. *Other*—disputes concerning protests directed against persons or situations other than those dealing with employer-employee relationship; non-award public holidays; accidents and funerals; no reason given for stoppage; etc.

INDUSTRIAL DISPUTES: DURATION, CAUSES AND METHODS OF SETTLEMENT, WORKING DAYS LOST, 1980 TO 1982(*a*)

('000)

	1980	*1981*	*1982*
DURATION			
Up to 1 day	228.6	293.0	187.1
Over 1 to 2 days	713.7	295.9	290.8
Over 2 to 3 days	204.4	530.8	323.0
Over 3 to less than 5 days	242.1	674.7	
5 to less than 10 days	407.7	1,131.5	515.1
10 to less than 20 days	447.6	926.3	629.0
20 to less than 40 days	500.2	438.5	247.0
40 days and over	318.0	136.7	
Total	**3,062.4**	**4,427.4**	**2,219.0**
CAUSES(*b*)			
Wages	1,101.8	2,066.9	1 081.4
Hours of work	230.6	1,099.1	455.2
Leave, pensions, compensation provisions, etc.	463.0	278.3	(*c*)
Managerial policy	701.8	687.8	369.1
Physical working conditions	167.1	176.5	155.6
Trade unionism	103.4	87.4	76.7
Other	294.6	31.3	81.0(*d*)
Total	**3,062.4**	**4,427.4**	**2,219.0**
METHODS OF SETTLEMENT(*e*)			
Negotiation	788.6	701.5	412.7
Mediation	25.0	9.5	(*f*)
State legislation—			
Under State conciliation, etc., legislation	255.5	323.8	129.2
Intervention, etc. of State Government officials	–	2.4	
Federal and joint Federal State legislation (*g*)	140.4	1,343.7	691.7
Filling the places of workers on strike or locked out	–	0.9	(*f*)
Closing down the establishment permanently	8.3	9.8	(*f*)
Resumption without negotiation	244.1	2,003.2	976.9
Other methods	–	32.7	8.6(*h*)
Total	**3,062.4**	**4,427.4**	**2,219.0**

(*a*) Refers to disputes which ended in the year. *See* page 156. (*b*) For nature of classification, *see* text above. (*c*) Included in 'Other'. (*d*) Includes 'Leave, pensions, compensation provisions, etc'. (*e*) Method directly responsible for ending the stoppage of work. (*f*) Included in 'Other methods'. (*g*) Includes Industrial Tribunals under (i) Conciliation and Arbitration Act, (ii) Coal Industry Acts, (iii) Stevedoring Act, (iv) Other Acts, and intervention, etc. of Federal government officials. (*h*) Includes 'Mediation', 'Filling the places of workers on strike or locked out' and 'Closing down the establishment permanently'.

The following table shows the number of working days lost per 1,000 employees in the years 1977 to 1982. For classification of causes *see* grouping on page 159. The figures to 1979 are based on estimates of employees as published in *Civilian Employees, Australia* (6213.0). As this series was suspended from April 1980, estimates from 1980 have been calculated by using estimates of employees from the labour force survey. For purposes of comparison, figures for 1979 have been shown on both bases.

INDUSTRIAL DISPUTES: INDUSTRIES, WORKING DAYS LOST PER THOUSAND EMPLOYEES

	Mining		*Manufacturing*			*Transport and storage, Communication*			
	Coal	*Other*	*Metal products, machinery and equipment*	*Other*	*Construction*	*Stevedoring services*	*Other*	*Other industries (a)*	*All industries*
1978	5,669	2,415	1,460	747	378	8,418	435	74	434
1979	8,744	5,412	1,818	1,147	1,044	8,106	1,126	270	787
1979(*b*)	8,021	5,649	1,872	1,116	1,115	(*c*)3,736	1,145	270	788
1980(*b*)	23,533	3,915	1,181	1,094	681	(*c*)2,556	354	202	650
1981(*b*)	10,011	5,141	2,285	989	1,423	(*c*)3,041	957	239	800
1982(*b*)	14,483	2,691	487	512	782	(*c*)1,087	667	85	396

(*a*) Excludes agriculture, etc. and private households employing staff. (*b*) Based on estimates from the labour force survey. (*c*) ASIC subdivision 53 -- Water transport.

INDUSTRIAL ACCIDENTS

Statistics of industrial accidents and diseases and workers' compensation are currently available only on a State basis and are included in the various State Year Books and publications. Some work to develop a collection including national totals and estimates on a uniform basis throughout the States began in 1978 and is continuing. Work is proceeding with respect to improving coverage, especially under jurisdictions other than the principal Workers' Compensation Act in each State.

LABOUR ORGANISATIONS

Labour organisations in Australia

Trade unions

For the purpose of these statistics a *trade union* is defined as an organisation, consisting predominantly of employees, whose principal activities include the negotiation of rates of pay and conditions of employment for its members. Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations. Results of this collection are published in the annual bulletin *Trade Union Statistics, Australia* (6323.0). The following table shows the position at the end of each of the years 1978 to 1982. Some of the figures shown have been revised; for a more detailed explanation of the revisions, see *Trade Union Statistics, Australia, December 1982* (6323.0).

TRADE UNIONS: NUMBER, MEMBERSHIP AND PROPORTION OF TOTAL EMPLOYEES

End of December—	*Number of separate unions(a)*	*Number of members ('000)*		*Proportion of total employees (per cent)*
		Males	*Females*	
1978	330	1,969.2	861.5	56
1979	328	1,971.4	902.2	56
1979	328	1,971.4	902.2	56 (*b*)
1980	325	2,009.5	946.3	56 (*b*)
1981	324	2,029.4	964.7	56 (*b*)
1982	322	2,024.4	988.0	57 (*b*)

(*a*) Without inter-State duplication. (*b*) Based on estimates from the labour force survey, *see* below.

In the table above the approximate percentages of wage and salary earners in employment who were members of trade unions are shown. The estimates of employees have been derived by adding figures for employees in agriculture and in private households employing staff to the estimates of employees in all other industries as at the end of each year. Estimates of the proportion of total employees for 1978 and 1979 are based on estimates of employees as published in *Civilian Employees, Australia*

(6213.0). As this series was suspended as from April 1980 the proportions of total employees shown from December 1980 have been calculated by using estimates of employees from the labour force survey. For purposes of comparison figures for December 1979 have been shown on both bases. The percentages shown should be regarded as giving only a broad indication of the extent of union membership among wage and salary earners because they are based on estimates of *employed* wage and salary earners which are subject to revision and because the degree of unemployment of reported union members will affect the percentages for a particular year and comparison over time.

TRADE UNIONS: CLASSIFICATION ACCORDING TO NUMBER OF MEMBERS, 1982

	Separate unions		*Members*	
Number of members	*Number*	*Proportion of total (per cent)*	*Number ('000)*	*Proportion of total (per cent)*
Under 100	46	14.3	2.5	0.1
100 and under 250	38	11.8	6.1	0.2
250 " " 500	25	7.8	9.1	0.3
500 " " 1,000	43	13.4	28.8	1.0
1,000 " " 2,000	45	14.0	61.3	2.0
2,000 " " 5,000	41	12.7	132.0	4.4
5,000 " " 10,000	21	6.5	147.3	4.9
10,000 " " 20,000	21	6.5	305.6	10.1
20,000 " " 30,000	9	2.8	207.4	6.9
30,000 " " 40,000	10	3.1	354.6	11.8
40,000 " " 50,000	9	2.8	402.7	13.4
50,000 " " 80,000	6	1.9	405.6	13.5
80,000 and over	8	2.5	949.4	31.5
Total	**322**	**100.0**	**3,012.4**	**100.0**

In March to May 1982 a survey based on the population survey (for details *see* the section *The Population Survey* earlier in this chapter) was conducted throughout Australia in order to obtain information about the industry and occupation, and some demographic characteristics, of wage and salary earners who were members of trade unions. Results of the survey are published in *Trade Union Members, Australia, March to May 1982* (6325.0).

Employer and employee organisations registered under Industrial Arbitration Acts, etc.

The Federal *Conciliation and Arbitration Act 1904* and a number of State industrial arbitration Acts provide for the registration of employer and employee organisations as outlined below. In general, registration is necessary before an organisation may appear before the relevant industrial arbitration tribunal.

In Victoria and Tasmania, where wages and conditions of work in the State sphere are determined by Wages Boards and Industrial Boards respectively, there is no provision in industrial arbitration legislation for registration of trade unions or employer organisations.

Federal. At the end of 1982 the number of employers' organisations registered under the provisions of the *Conciliation and Arbitration Act 1904* was 86. The number of unions registered at the end of 1982 was 150, with membership of approximately 2.48 million, representing 82 per cent of the total membership of all trade unions in Australia. Lists of organisations of employees and employers registered under this Act are published periodically by the Office of the Industrial Registrar (Australian Conciliation and Arbitration Commission). (Branches of employer organisations and unions may also register under various State Acts, as outlined below.)

New South Wales. At 30 June 1983 there were 112 employee unions and 304 employer unions registered under provisions of the *Industrial Arbitration Act 1940*, and 126 employee unions, 11 employer unions, and 7 other unions registered under the *Trade Union Act 1881*. (Unions may register under either or both Acts.) Lists of unions registered under these Acts are included in the *New South Wales Industrial Gazette*. (*See* Vol. 230 for details at 30 June 1983.)

Queensland. At 31 December 1982 there were 71 employee unions registered under the *Industrial Conciliation and Arbitration Act 1961–1980* with a reported membership of 385,211. At the same date, 39 employer unions with a reported membership of 36,617 employers were registered. Lists of registered employee and employer unions are published in the annual report of the President of the Industrial Court.

South Australia. At the end of December 1982 there were 10 employer associations and 69 employee associations registered under the provisions of the *Industrial Conciliation and Arbitration Act 1972* as amended. Membership of these employee associations totalled approximately 196,892.

Western Australia. At 30 June 1983 there were 66 unions of workers, with an aggregate membership of 176,065, registered under the provisions of the *Industrial Arbitration Act*, 1979–1982. At the same date there were 14 registered unions of employers with a reported aggregate membership of 2,138 employers. Lists of registered unions of workers and of employers, together with membership figures, are published in the *Annual Report of the Chief Industrial Commissioner of the Western Australian Industrial Commission.*

Central Labour Organisations

At the end of September 1983 the main central labour organisation was the *Australian Council of Trade Unions* (ACTU), which came into being in 1927 and at the end of September 1983 had affiliated with it 157 trade unions with a combined membership of approximately 2.3 million.

International Labour Organisation

The International Labour Organisation (ILO) was established on 11 April 1919, as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII of the Treaty of Versailles. With certain amendments this constitution remains the charter of ILO to this day, bringing governments, employers and trade unions together to discuss international labour and social problems. A new definition of the aims and purposes of the ILO known as the Declaration of Philadelphia, which was added to the constitution at the 1944 Session of the International Labour Conference, asserted the responsibility of ILO in combating poverty and insecurity. In 1946 the Organisation became the first of the specialised agencies of the United Nations. Under the terms of agreement, the United Nations recognises the ILO as a specialised agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organisation, social security and other aspects of social policy.

The ILO operates through a tripartite structure which enables governments, employers and workers to participate directly in its activities. The Organisation consists of the International Labour Conference, which is responsible for the formulation of international labour standards, and is composed of four representatives (2 government, one employers' and one workers') from each of the 150 Member States; the Governing Body, which decides numerous matters relating to the overall direction of the ILO and which consists of the representatives of 28 governments, 14 employers' and 14 workers' representatives; and the International Labour Office, which collects and distributes information on all subjects relating to the international adjustment of conditions of work and provides the secretariat. Particulars of the proceedings of International Labour Conferences up to the 58th Session and details of ILO conventions ratified by Australia are given in *Labour Report* No. 58, 1973, pages 255–9.

ILO publications on labour statistics include *International Recommendations on Labour Statistics, An Integrated System of Wages Statistics,* the quarterly *Bulletin of Labour Statistics* and the *Year Book of Labour Statistics.*

One of the functions of the ILO is to sponsor the International Conferences of Labour Statisticians at which the ABS is usually represented. Since 1923, the ILO has conducted 13 International Conferences of Labour Statisticians, the latest being held in Geneva in October 1982. These conferences are responsible for recommending and reviewing standards which the ABS adopts wherever practicable.

EMPLOYMENT AND TRAINING PROGRAMS

The Commonwealth Government has a range of programs designed to promote work experience and training. The principal aims of these programs are to maintain an adequate supply of trained persons to meet the needs of industry and to assist disadvantaged groups in the labour market. The main Commonwealth programs are described below.

Trade Training

Commonwealth Rebate for Apprentice Full-time Training (CRAFT)

This program compensates employers for the cost of releasing apprentices to attend off-the-job-training courses, including basic trade courses provided by technical education institutions. From 1 January 1983 it pays tax exempt rebates of between $21.00 and $41.00 per day, depending upon the trade and level of training.

Special apprentice training

Four types of support are available for certain categories of apprentices. Under the *Group One Year Scheme* assistance is provided to enable apprentices indentured to private employees to undertake their first year of training in Government establishments.

The *Special Assistance Program* makes provision for a subsidy to employers to employ apprentices who have been retrenched by their former employer and a training allowance to enable retrenched apprentices to continue training by attending approved full-time courses. Assistance provided under the *Group Apprenticeship Apprentice Support Program* enables small employers who would normally be unable to employ apprentices to establish joint projects to train apprentices. The *Special Trade Training Program* has been developed to provide special assistance for the training of adult apprentices in skills which are in short supply.

Skills Training

Skills in demand

This program promotes the training of persons in particular skills which are in demand by industry. It offers a range of assistance including the costs of establishing and running training courses and providing allowances for unemployed trainees. The development and management of this training is on a joint industry and government basis.

Labour adjustment training arrangements

Redundant workers in designated instances of large scale retrenchments are eligible for flexible packages of special training assistance. The arrangements are developed in consultation with the retrenching firm(s), relevant unions and education authorities and are implemented in educational institutions and available industry training facilities. Assistance is provided through the payment of allowances to eligible trainees, negotiating special courses not locally available and meeting the costs of development and provision of such courses.

Under General Training Assistance subsidies can be provided to employers who employ and train an eligible unemployed person when no suitably trained applicants can be referred to the position by the Commonwealth Employment Service. The weekly rates for on-the-job training are $63.70 per week for juniors and $86.90 per week for adults.

A training allowance is also available for eligible unemployed people who undertake formal training in an occupation which is in demand. Trainees receive an income-tested living allowance which comprises a basic component equivalent to their entitlement to unemployment benefit, and a training component. The training component for adults is $46.35 per week and for trainees under 18, $23.20 per week.

Industry training services

In addition to specific schemes directed at the training of individuals, the Government also provides aid to assist industry to develop and improve its own training programs.

Youth Training

A *School to Work Transition Allowance*, equal to the level of unemployment benefit plus $6.00 per week, is available to eligible unemployed young persons to enable them to attend full-time transition courses conducted by Technical and Further Education (TAFE) Colleges. For further details refer to Education chapter on page). A *Pre-Apprenticeship Allowance* of $20.00 per week is available to persons who are ineligible for higher allowances from other Commonwealth schemes while they are attending Government funded pre-apprenticeship training at TAFE institutions.

Special Youth Employment Training Program (SYETP)

A major disadvantage faced by young people competing in the labour market is a lack of appropriate work skills and previous work experience. Often a lack of personal qualities or formal qualifications required by employers add to their difficulties.

To offset these disadvantages, wage subsidies may be provided to employers. To qualify for the subsidy, employers must be prepared to make available work experience and basic training opportunities, on a full-time basis, for at least 17–34 weeks.

Two levels of subsidy are available:

Standard SYETP where $75.00 per week is provided for up to 17 weeks for young people aged between 15 and 24 years who are registered as unemployed with the Commonwealth Employment Service (CES) and have been so registered and away from full-time education for at least four of the last twelve months; and

Extended SYETP where a subsidy at $100.00 per week is provided for up to 17 weeks, then $75.00 per week for a further 17 weeks for young people aged between 18 to 24 years who are registered as unemployed with the CES and have been so registered and away from full-time education for at least eight of the last twelve months.

Employment Creation

Community Employment Program (CEP)

This program was established by the *Community Employment Act 1983* and is designed to create additional employment opportunities for unemployed persons through the funding of labour intensive projects of social and economic benefit to the community. The CEP is directed at those unemployed persons who are particularly disadvantaged in the labour market and who are consequently least likely to benefit from improved economic activity. These include the longer term unemployed, Aboriginals, migrants with English language difficulties and the disabled. It is an objective of the CEP that 50% of the jobs created will be for women.

Eligible projects are those which provide additional employment to that which otherwise would have occurred; are labour intensive; provide services of public and community value and provide worthwhile work experience and/or training for participants.

The Commonwealth's contribution is on the basis of meeting 70% of project budget costs overall. Sponsors will normally be required to contribute 30% of the total budget cost of their projects, but this requirement may be wholly or partially waived for a particular project, when the applicants can demonstrate an inability to contribute any or all of the 30% and can demonstrate the value of the project within the terms of the Program guidelines.

Assistance for Long-term Unemployed Adults

Adult Wage Subsidy Scheme (AWSS)

Under this scheme, employers are offered a wage subsidy to provide adult long-term unemployed job seekers with a period of stable employment with the intention of facilitating their re-integration in the employed labour force.

Two levels of subsidy are available:

Standard: A subsidy of $100 per week for 17 weeks followed by $75 per week for a further 17 weeks is paid in respect of job seekers aged 25 and over who have been unemployed, registered with the CES and away from full-time education for at least 8 months in the last 12.

Extended: A subsidy of $125 per week for 52 weeks is payable in respect of job seekers 45 years and over who have been continuously unemployed, registered with the CES, and away from full-time education for the previous 12 months.

Special training

Some groups in the community, because of background and circumstances beyond their control, face additional disadvantages in gaining and maintaining employment. In recognition of these disadvantages special programs, allowances and subsidies are available.

Two such groups are Aboriginals and the disabled. Assistance provided includes the provision of *public sector training* positions, *training allowances* and *employer subsidies*. Special training projects for Aboriginals and work preparation courses for disabled persons are also supported.

Employment services

A number of programs are funded to support the Government's manpower and training policies and to offset the effects of certain inefficiencies in the labour market.

The two main types of program are mobility assistance programs and information programs. Mobility assistance includes *Relocation Assistance Scheme* (RAS) which assists the relocation of unemployed people or people who have received notification of impending redundancy and who are unable to obtain within a reasonable time continuing employment in the area in which they live, and the *Fares Assistance Scheme* (FAS) which assists unemployed people to attend job interviews with prospective employers.

The information programs include the provision of *Occupation Information* and a *National Promotional Campaign* to ensure a widespread knowledge of the assistance provided under the Government's programs.

Youth Support

Assistance to unemployed young persons is provided through labour market support programs which encourage the community to respond to their needs.

Community-based youth programs

Community Youth Support Scheme (CYSS). The objective of CYSS is to encourage communities to assist local unemployed young people to develop their capacity for obtaining and retaining employment, and also to become more self-reliant during periods of unemployment.

Volunteer Youth Program which provides grants to community organisations for the purpose of facilitating the placement of unemployed young people in voluntary community service activities with the aim of developing and enhancing their work-related skills.

Community Youth Special Projects Program which assists community organisations to develop individual projects aimed at offering the young unemployed full-time structured training and employment-related training activities.

Trade recognition

The *Tradesmen's Rights Regulation Act 1946* provides a national tripartite system under which persons who have not completed an Australian apprenticeship may achieve recognition as tradespersons in specified classifications in the metal, electrical, footwear trades.

Trade Union Training Authority

The Trade Union Training Authority (TUTA) was established in 1975 for the provision, coordination, promotion and evaluation of trade union training in Australia. Training programs are conducted at TUTA's centres in each capital city, in country locations throughout Australia and at the TUTA's national residential college at Albury/Wodonga, the Clyde Cameron College.

DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS
LABOUR FORCE PROGRAMS AND SERVICES
EXPENDITURE
1978-1979 TO 1983-84

Type of program	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*	*1983–84 (est.)*
		$'000				
Trade Training Program						
CRAFT	24,431	42,702	64,451	78,749	84,938	96,980
Special Apprentice Training	3,700	3,100	3,600	3,360	10,456	20,840
Skills Training Program						
General Training Assistance	15,900	9,700	10,732	8,273	5,998	4,531
Labour Adjustment Training Arrangements and Skills-in-Demand	—	500	478	2,482	3,606	12,000
Industry Training Services	1,174	2,006	3,000	4,500	5,222	7,000
Youth Training Program						
School-to-work Transition						
Allowance (incl. Experimental Training Projects)	2,300	3,000	4,703	8,423	12,313	15,210
Pre-apprenticeship allowance	1,150	1,150	1,587	1,146	1,941	3,520
Work experience	82,640	24,158	41,255	53,702	63,625	74,750
Special Training Program						
Training for Aboriginals	13,400	11,000	13,928	19,044	24,610	25,760
Training for the disabled	1,400	1,000	2,719	6,471	6,312	6,500
Special Needs Clients	—	—	731	1,007	751	900
Employment Services						
Relocation assistance scheme	1,144	1,050	1,265	1,599	2,160	2,000
Fares assistance scheme	108	220	303	264	362	380
Occupational information	—	561	1,620	1,211	1,627	2,402
Former Regular Servicemen's vocational training scheme	120	220	287	196	74	73
National promotional campaign	—	—	840	124	962	2,695
Employment strategies	119	297	428	290	512	—
Industrial Democracy Grants	—	—	—	—	—	200
Community-Based Youth Programs						
Community Youth Support Scheme	10,711	11,600	13,800	14,200	17,880	21,204
Volunteer Youth Program	—	109	157	151	178	379
Community Youth Special Projects	—	—	206	586	1,499	3,626
Assistance for Long Term Unemployed						
Adult Wage Subsidy Scheme	—	—	—	—	375	10,050
Private Sector Assistance						
Private Sector Assistance Program	—	—	—	—	—	22,000
Total Labour Force Programs and Services (excl. Employment Generation)	*158,297*	*112,373*	*165,090*	*205,778*	*245,401*	*333,000*
Employment Generation	—	—	—	—	100,000	400,000
Total	**158,297**	**112,373**	**166,090**	**205,778**	**345,401**	**733,000**

DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS LABOUR FORCE PROGRAMS AND SERVICES NEW APPROVALS 1980–81 TO 1983–84

Type of program	*1980–81*	*1981–82*	*1982–83*	*1983–84 (est.)*
Trade Training Program				
CRAFT	92,000	99,000	100,544	96,000
Special Apprentice Training	2,395	3,040	8,278	8,130
Skills Training Program				
General Training				
Formal	1,801	1,086	1,656	1,300
On-the-job	15,724	7,320	3,526	1,360
Labour Adjustment				
Training and Skills-in-Demand	390	1,213	1,615	3,000
Youth Training Program				
School-to-work	8,330	11,456	14,219	16,100
Pre-apprenticeship	1,778	1,596	3,785	4,950
Work experience				
Standard SYETP	51,273	37,525	45,129	20,200
Extended SYETP	6,494	10,582	16,337	6,850
Commonwealth	3,622	3,589	4,233	4,800
State SYETP	—	—	567	1,300
Special Training Program				
Aboriginals	4,900	4,628	5,697	4,700
Disabled	2,125	3,776	3,206	2,850
Special Needs Clients	200	915	1,012	900
Employment Services				
Relocation Assistance Scheme	1,527	1,513	1,985	2,000
Assistance for Long-Term Unemployment				
Adult Wage Subsidy Scheme	—	—	1,642	2,850
Private Sector Assistance				
Private Sector Assistance Program	—	—	—	38,200
Employment Generation	—	—	(n.a.)	40,000
Total	**192,359**	**187,239**	**213,431**	**255,490**

CHAPTER 9

SOCIAL SECURITY AND WELFARE

The Commonwealth Government, the State Governments and voluntary welfare organisations all provide social welfare services. This chapter concentrates on the benefits and services provided by the Commonwealth Government, principally those of the Departments of Social Security and Veterans' Affairs but mention is also made of the services provided by the Departments of Aboriginal Affairs and Immigration and Ethnic Affairs.

Details of services administered by the Commonwealth Department of Health are given in Chapter 10, Health. Details of pension and superannuation schemes for government and semi-government employees, mine workers, parliamentarians and employees of private business are included in Chapter 21, Private Finance.

Commonwealth Government expenditure on social security services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed, orphaned and unemployed; assistance to families; etc. On 1 July 1947, with the passage of the *Social Services Consolidation Act* 1947, all Acts providing social service benefits were amalgamated. The Act is at present styled the *Social Services Act* 1947.

The main social security benefits provided by the Commonwealth Government under the *Social Services Act* 1947, as at June 1983, and the date on which each came into operation, are shown below:

Age pension	1 July 1909
Invalid pension	14 October 1910
Family allowance	1 July 1941
Widow's pension	30 June 1942
Funeral benefit	1 July 1943
Unemployment benefit	1 July 1945
Sickness benefit	1 July 1945
Special benefit	1 July 1945
Allowances associated with the Commonwealth Rehabilitation Service (including Rehabilitation allowance)	10 December 1948
Sheltered employment allowance	30 June 1967
Wife's pension (superseded wife's allowance)	5 October 1972
Supporting parent benefit	3 July 1973
Double orphans' pension	26 September 1973
Handicapped child's allowance	30 December 1974
Mobility allowance	1 April 1983
Family income supplement	1 May 1983

Details of the respective rates of pensions and benefits and details of associated allowances available to certain recipients are shown, along with more specific eligibility criteria, in the Annual Report of the Department of Social Security.

Age and invalid pensions and associated payments

Age pensions are payable to men and women who have reached the ages of 65 and 60 respectively. They are generally subject to residence qualifications and an income test.

Invalid pensions are payable to persons between sixteen years of age and age pension age who are permanently incapacitated for work to the extent of at least 85 per cent, or permanently blind. Invalid pension is paid subject to an income test.

A wife's pension is payable to the wife of a pensioner not entitled, in her own right, to an age, invalid or repatriation service pension. There is no residence qualification, but an income test applies.

Additional pension is payable for each dependent child under 16 years, subject to the income test. Widowed or other unmarried age or invalid pensioners with a dependent child may, in addition, receive a guardian's allowance. Supplementary assistance, subject to a special income test, is available to pensioners if they pay rent or pay for board or lodging.

AGE PENSIONERS: 30 JUNE

Age	*1981*	*1982*	*1983*
60–64 years	157,600	156,882	161,921
65–69 years	343,100	335,014	326,582
70–74 years	358,400	367,469	376,115
75 years and over	488,300	507,670	526,220
Total	**1,347,400**	**1,367,035**	**1,390,838**
Number of wife pensioners	29,241	27,516	26,380
Total payments during year(*a*) $'000	3,935,796	4,506,946	4,867,554

INVALID PENSIONERS: 30 JUNE

Age	*1981*	*1982*	*1983*
16–19 years	7,600	7,064	6,805
20–39 years	48,100	48,039	49,102
40–59 years	119,900	116,046	117,844
60 and over	46,400	45,500	46,538
Total	**222,000**	**216,649**	**220,289**
Number of wife pensioners	57,092	54,804	57,011
Total payments during year(*a*) $'000	880,795	977,125	1,068,350

(*a*) Includes allowances, supplementary assistance and wives pensions where applicable.

Sheltered employment allowance and associated payments

Sheltered employment allowance is payable to disabled people who are employed in approved sheltered workshops and are otherwise qualified to receive an invalid pension or would become so qualified if they ceased to be provided with sheltered employment. The allowance is subject to the same income test as applies to invalid pension and is paid at the same rate. It is payable in the form of a supplement to the sheltered employee's wages.

At 30 June 1983, 213 workshops were paying the allowance to 9,342 disabled employees. Expenditure during the year 1982–83 was $40,720,000.

Widows' pensions and associated payments

There are three categories of widow pensioners:

Class 'A'. A widow who has the custody, care and control of one or more qualifying children under the age of sixteen years or dependent full time student aged 16–24;

Class 'B'. A widow who, because she has no qualifying children or students in her custody, care and control, is not eligible for a Class 'A' widow's pension but is either at least 50 years of age or, after having reached the age of 45, has ceased to receive a Class 'A' pension by reason of ceasing to have the custody, care and control of a qualifying child or student; and

Class 'C'. A widow not eligible for Class 'A' or Class 'B' widow's pension, who is under 50 years of age and is in necessitous circumstances within 26 weeks of her husband's death.

A widow's pension is income tested and is not payable to a woman receiving an age or invalid pension, a supporting parent's benefit, an unemployment, sickness or special benefit, a sheltered employment allowance, or a war widow's pension.

In addition to the basic pension, a mother's/guardian's allowance is payable in the case of a widow with children. Supplementary assistance is also available to widows if they pay rent or pay for board or lodging.

WIDOW PENSIONERS, BY AGE: 30 JUNE

Age	*1981*	*1982*	*1983*
Class A widow pensioners aged—			
Under 20 years	100	96	96
20–29 years	15,800	13,610	11,883
30–39 years	37,000	36,607	37,082
40–49 years	23,800	23,952	24,807
50–59 years	10,800	10,352	10,211
60 years and over	200	183	182
Class B widow pensioners aged—			
45–49 years	3,100	3,203	3,282
50–54 years	18,900	19,146	19,609
55–59 years	38,400	38,633	38,898
60 years and over	17,400	18,176	18,437
Class C widow pensioners	124	133	119
Total	**165,661**	**164,091**	**164,606**
Total payments during year (a) $'000	**641,792**	**717,386**	**758,086**

(*a*) Includes payment to benevolent homes for maintenance of pensioners. It also includes supplementary assistance and allowances.

Supporting parent's benefit

Supporting parent's benefit was introduced in November 1977 to extend to supporting fathers the same benefit as had previously been available to supporting mothers through supporting mother's benefit. The benefit is available to sole parents who have custody, care and control of a child under 16 years or a dependent full-time student aged 16 to 24 years. It is subject to an income test.

SUPPORTING PARENTS, BY AGE AND TYPE: 30 JUNE

Age and type of beneficiary	*1982*	*1983*
Age		
Under 20 years	9,741	9,787
20–29 years	60,904	66,501
30–39 years	38,197	45,623
40–49 years	12,227	14,907
50–59 years	2,752	3,255
60 years and over	121	153
Type of beneficiary Females—		
Unmarried mothers	38,622	41,654
Separated wives	64,222	73,801
Separated de facto wives	15,175	16,903
Males—		
Widowers	856	1,072
Divorcees	1,106	1,468
Separated husbands	2,670	3,757
Separated de facto husbands	1,129	1,431
Other	162	142
Number of beneficiaries	123,942	140,228
Total payments during year (a) $'000	605,864	727,734

(*a*) Includes supplementary assistance and allowances.

Fringe benefits

The Commonwealth Government makes available to pensioners and recipients of supporting parent's benefits several 'fringe benefits'. In most cases these are subject to a special income test. These benefits include:

- free medical treatment if the doctor bulk bills (otherwise 85 per cent of the Schedule fee is refunded up to a set maximum for each service).
- a comprehensive range of pharmaceuticals free of charge;
- a one-third reduction in telephone rental (subject to the income of co-residents);
- reduced fares for Commonwealth Government railway and shipping services;

- certain postal concessions;
- free hearing aids; and
- free optometrical consultations.

State Governments, local government authorities and private organisations also provide certain fringe benefits. The most valuable of these are reductions in local government rates and in public transport charges.

There were 1,659,284 pensioners with PHB (Pensioner Health Benefits) cards entitling them to Commonwealth pensioner fringe benefits at 30 June 1983.

Unemployment, and sickness and special benefits and associated payments

Unemployment and sickness benefits are paid to men over sixteen and under sixty-five years of age, and to women over sixteen and under sixty years of age, who are unemployed or temporarily incapacitated for work. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. Both benefits are subject to an income test. A person cannot receive both benefits simultaneously, nor can a person receive either benefit at the same time as an invalid, widow's, service pension or supporting parent's benefit.

For unemployment benefit purposes, people must establish that they are unemployed, that their unemployment is not due to industrial action by themselves or by members of a union of which they are a member, that they are capable and willing to undertake suitable work, and that they have taken reasonable steps to obtain such work. Registration for employment with the Commonwealth Employment Service is necessary. For sickness benefit purposes, people must establish that they are temporarily incapacitated for work because of sickness or injury and that they have thereby suffered a loss of salary, wages or other income.

All unemployment and sickness beneficiaries with dependent children are eligible for an additional benefit for each dependent child. After the benefit has been paid for six consecutive weeks a sickness beneficiary who is paying rent or is paying for board or lodging may be entitled to a supplementary allowance.

In the case of sickness benefit, any amount of compensation, damages or similar payment, or war disability pension, paid in respect of the same incapacity as that for which the benefit is claimed, is deducted from the benefit if it is paid in respect of the same period.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not eligible for any pension, and who, because of age, physical or mental disability or domestic circumstances, or any other reason, is unable to earn a sufficient livelihood for himself/herself and his/her dependants. Recipients of special benefits include, among others, unmarried women for a period before and after the birth of a child, persons caring for invalid parents or sick relatives/children, and persons ineligible for a pension because of lack of residence qualifications.

The benefit is designed to meet cases of special need and may also be paid as income support over a period if no other social security benefit is payable.

The rate paid may not exceed the rate of unemployment or sickness benefit which could be paid if the claimant were qualified to receive it.

UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS; YEAR ENDED 30 JUNE

	1981	*1982*	*1983*
Unemployment beneficiaries:			
Number of benefits granted	(*b*)782,500	(*b*)833,600	1,115,323
Number on benefit at end of year	(*b*)314,500	390,664	635,002
Average number on benefit at end of each week during year	(*b*)310,000	(*b*)332,000	540,198
Sickness beneficiaries:			
Number of benefits granted	(*b*)140,900	(*b*)154,600	156,632
Number on benefit at end of year	(*b*)49,000	53,522	64,203
Average number on benefit at end of each week during year	(*b*)44,500	(*b*)48,600	57,684
Special benefit beneficiaries:			
Number of benefits granted	(*b*)72,700	(*b*)69,700	70,074
Number on benefit at end of year	(*b*)17,850	16,162	20,899
Average number on benefit at end of each week during year	(*b*)19,550	(*b*)18,100	20,110
Amount paid during year(*a*) $'000:			
Unemployment	995,748	1,224,343	2,248,980
Sickness	174,477	225,053	270,776
Special benefit	66,100	74,107	89,167

(*a*) Includes additional benefits for children. (*b*) Estimated.

Family allowances

A family allowance is paid to a person caring for children under sixteen years or full-time students aged 16–24 years who are wholly or substantially dependent on that person. Family allowance is not paid for students receiving Tertiary Education Assistance or other related Commonwealth education allowances. Payment is usually made to the mother. Approved charitable, religious or government institutions are paid family allowances for children in their care.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Security is satisfied that they intend to remain in Australia permanently. Under certain conditions, family allowance may be paid to Australians who are temporarily absent overseas.

FAMILY ALLOWANCES: 30 JUNE, 1983

Number of children and students in family	*Number of families*								
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total(a)*
1	262,760	194,498	118,325	68,903	67,124	21,758	7,474	11,944	752,786
2	292,360	230,232	135,023	77,976	80,904	24,692	7,680	16,342	865,209
3	131,521	105,940	64,564	30,070	35,930	11,264	3,918	7,673	390,880
4	37,734	30,415	20,147	7,089	9,505	3,182	1,466	2,157	111,695
5	8,182	6,640	4,944	1,314	1,926	704	530	438	24,678
6	2,434	1,866	1,522	347	530	151	220	117	7,187
7	689	564	509	105	164	46	82	22	2,181
8 or more	363	286	243	52	76	23	30	25	1,098
Total	**736,043**	**570,441**	**345,277**	**185,856**	**196,159**	**61,820**	**21,400**	**38,718**	**2,155,714**
No. of children in approved institutions	2,833	2,527	2,222	424	1,264	125	92	37	9,524
Amount paid during year ($'000)	491,089	366,469	227,364	125,557	124,032	39,146	(*a*)	(*e*)	1,373,709

(*a*) Expenditure for N.T. and A.C.T. included in expenditure for S.A. and N.S.W. respectively.

Handicapped child's allowance

Parents or guardians of a child under sixteen years or a dependent full-time student who is severely handicapped mentally and/or physically, is living in the family home, and needs constant care and attention, are entitled to a handicapped child's allowance. The allowance is not subject to an income test, but a residence qualification similar to that for family allowance applies. The allowance is also available to persons on low income who are caring for a substantially handicapped child and are suffering severe financial hardship as a result of expenditure associated with the child's disability. The number of handicapped child's allowances being paid at 30 June 1983 was 27,909. The total amount paid through these allowances during the year 1982–83 was $25,690,000.

Allowances association with the Commonwealth Rehabilitation Service (CRS)

The Commonwealth Rehabilitation Service assists people with a long-term disability who are within the broad working age group. It aims to help disabled people to reach their maximum physical, mental, social and vocational usefulness and to assist them to live as independently as possible. Towards this aim, it provides co-ordinated programs of treatment and training to meet the special needs of each disabled person. Responsibility for the delivery of these services rests with the residential and day-attendance rehabilitation centres, work adjustment centres, work preparation centres, and regional rehabilitation units.

Rehabilitation may also be made available to people aged 14 or 15 years who, without treatment or training, would be likely to qualify for invalid pension at age sixteen.

Since March 1983 persons undertaking a Commonwealth rehabilitation program and who would otherwise have been eligible for another pension or benefit were paid a rehabilitation allowance subject to an income test. Living-away-from-home allowance is paid where necessary. Fares and living expenses (including those of an attendant where required) in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary aids, appliances and modifications may be provided free of charge to a person receiving treatment and training or who needs them to assist him to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his rehabilitation.

Treatment, training and assessment programs are undertaken at rehabilitation centres where occupational therapists, vocational counsellor, qualified tradesmen and teachers determine the skills which make best use of ability and which are best adapted to the person's needs. In addition to the services provided at each centre, technical schools, business colleges, universities, training on-the-job in commerce or industry and correspondence courses are all used for training purposes. In 1982–83, 6108 persons commenced rehabilitation.

Portability of social service payment

Age, invalid and widows' pensions and supporting parent's benefits continue in force for recipients who have left Australia unless they left before 8 May 1973 or their pension or benefit is subject to the provisions of either of the reciprocal agreements with New Zealand or the United Kingdom. In certain cases of hardship, the pension or benefit may continue for people who left before 8 May 1973. The number of Australian pensions being paid overseas under the general portability provisions at 30 June 1983, was 18,621.

Other services of the Department of Social Security

The Department of Social Security provides a professional social work service and Ethnic and Aboriginal Liaison Office Schemes. It administers grants to major national welfare organisations such as: Australian Council of Social Service, Australian Council on the Ageing, Australian Council for Rehabilitation of Disabled, Australian Early Childhood Association and to non-government welfare agencies providing emergency relief or in financial difficulties.

To assist in its role of advising the government on welfare policy, the Department of Social Security initiates, develops and evaluates experimental projects in social welfare and undertakes research studies.

The Department supports the work of the Social Welfare Research Centre at the University of New South Wales and provides a grant to the Social Welfare Research Unit of the Australian Council of Trade Unions (ACTU).

Commonwealth Government assistance through welfare organisations

Accommodation for aged and disabled people

The *Aged or Disabled Persons Homes Act* 1954 is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the Act an organisation must be:

(i) carried on otherwise than for the purposes of profit or gain to the individual members; and

(ii) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Commonwealth or any State Government is not eligible for assistance under the Act.

The Director-General of the Department of Social Security or his delegate may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons.

The following table gives information regarding grants approved for each of the past three years. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

AGED OR DISABLED PERSONS HOMES ACT: GRANTS AND AMOUNTS APPROVED AND BEDS PROVIDED

		1980–81	*1981–82*	*1982–83*
Grants approved	No.	161	119	230
Amount approved	$'000	39,154	28,715	54,455
Beds provided—				
Self-contained	No.	396	324	751
Hostel	"	990	691	1,400
Nursing	"	1,676	1,031	1,455
Total	"	**3,062**	**2,046**	**3,606**

The Aged or Disabled Persons Homes Act also provides a *personal care subsidy* paid to eligible organisations for persons of eighty years of age or over and other persons requiring and receiving approved personal care while living in hostel-type accommodation provided by organisations eligible under the Aged or Disabled Persons Homes Act. The following table gives details of the premises approved, payments made and number of residents aged eighty years or over residing in the approved premises.

AGED OR DISABLED PERSONS HOMES ACT: PERSONAL CARE SUBSIDIES, 30 JUNE 1983

		N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Approved premises	No.	248	220	137	107	82	22	2	6	824
Residents qualifying . . .	No.	6,508	5,583	4,132	3,237	2,473	596	39	108	22,676
Subsidies paid, 1982–83 . .	$'000	10,534	9,034	6,096	5,001	4,027	920	54	176	35,842

Handicapped people

Under the *Handicapped Persons Assistance Act* 1974 eligible organisations may apply for subsidies towards the cost of providing capital projects, maintenance and equipment. Grants are also available in respect of rental and certain salary payments.

As well as assisting organisations with establishment and running costs, the legislation also provides financial encouragement to sheltered workshop administrations to provide the type of training for the handicapped which will prepare them, where possible, for open employment. A *training fee* is paid to organisations providing approved sheltered employment for each handicapped employee who graduates to open employment. During 1982–83 assistance was provided to 1147 organisations at a total cost of $71,200,000.

Homeless people

The *Homeless Persons Assistance Act* 1974 helps non-profit organisations and local governing bodies which provide accommodation, food and social welfare services for homeless men and women.

The Act enables grants to be made to eligible organisations to meet the cost of purchasing, constructing, altering or renting buildings to be used as homeless persons' assistance centres, as well as to meet the cost of purchasing furniture, furnishings and equipment for such centres. Grants also meet half the salary of a social welfare worker employed at a centre. The amount of grants made for these purposes during 1982–83 was $5,342,356.

The *Delivered Meals Subsidy Act* 1970 helps eligible organisations to establish, maintain, expand and improve 'meals on wheels' services. In 1982–83, 764 organisations had received a total subsidy of $4,824,001 under the Act.

Children's Services

The Children's Services Program is administered by the Office of Child Care, within the Department of Social Security. It provides grants to State, and local governments and community organisations for a flexible network of services for children and their families mainly concentrating on day care and pre-school centres. The general principle guiding approval of grants is one of directing assistance on a needs basis.

Other services funded under the program include support services for families and adolescents, special services for migrants, Aborigines and disabled children and research, evaluation and information projects.

Two components of the Program which are administered jointly with State Governments have been identified as the Family Support Services and the Youth Services Schemes. While these are identified separately as schemes, they are an integral part of the Children's Services Program.

EXPENDITURE ON CHILDREN'S SERVICES PROGRAM
($'000)

	1980–81	1981–82	1982–83
Pre-school	31,183	33,005	33,090
Other child care	42,851	47,355	64,954
Total	**74,034**	**80,360**	**98,044**

Aboriginals

A referendum in May 1967 led to the repeal of section 127 of the Constitution which provided that, in reckoning the numbers for census purposes, Aboriginals should not be counted, and to the deletion of the words 'other than the Aboriginal race in any State' from section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws in respect to people of any race. The Constitutional amendment, in effect, gave the Commonwealth Government shared power with the State Governments in relation to Aboriginals. The Commonwealth Government's aim is to help Aboriginals become self-managing and self-sufficient while, at the same time, preserving and developing their own distinctive culture. The Commonwealth Department of Aboriginal Affairs which is responsible for policy, planning and co-ordination in respect of Aboriginal affairs at the national level has regional offices in all States and the Northern Territory.

The National Aboriginal Consultative Committee (NACC), established in 1973, was replaced in 1977 by the National Aboriginal Conference (NAC) whose 36 members are elected by Aboriginals throughout Australia for three-year terms. Its role is to provide a forum in which Aboriginal views can be expressed at State and national level and, in particular, to express Aboriginal views on the long term goals and objectives which the Government should pursue, the programs it should adopt in Aboriginal affairs, and on the need for new programs in Aboriginal affairs.

From 1 July 1981, the NAC Executive assumed the advisory functions and powers of the former Council for Aboriginal Development.

The Aboriginal Development Commission (ADC), an all-Aboriginal Commission, was established in 1980 by the Commonwealth Government as an independent body. The ADC assists Aboriginal and Torres Strait Islander groups, communities and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

Migrants

Intake

The number of migrants who have come to Australia since the end of the Second World War is approaching the 4 million mark. These migrants have contributed significantly to Australia's population which has more than doubled, from 7.4 million at the end of 1945 to 15.1 million at the end of 1981. At the time of the 1981 Census, almost 22 per cent of Australia's population was overseas born. Post-war immigration peaked in 1970 with 185,300 settler arrivals, declined thereafter to a low of 54,100 in 1975, but has steadily increased again, to 118,700 in 1981 and 107,171 in 1982.

Accommodation of migrants

Migrant Centres provide a residential base for the provision of programs and services for newly arrived refugees and some other migrants.

There are 14 Migrant Centres located in all states and the N.T. with a capacity to accommodate up to 10,000 migrants and refugees. Additionally, 378 migrant transitory flats can accommodate up to 1,900 persons at any time.

Due to a downturn in demand for migrant centre accommodation the Department of Immigration and Ethnic Affairs has closed 4 migrant centres, but two of these (Cabramatta and Fairy Meadow) continue to provide non-residential services such as English tuition and orientation classes.

The Commonwealth Minister for Immigration and Ethnic Affairs has overall responsibility for migrant centres and flats with catering and accommodation services provided by Commonwealth Accommodation and Catering Services Limited on an agency basis.

Ethnic affairs—Services for migrants and refugees

The Department of Immigration and Ethnic Affairs provides services to facilitate the successful settlement and welfare of migrants and refugees.

In addition, the Department is responsible, through its Ethnic Affairs Division, for advancing policies designed to secure the successful settlement and integration of migrants into Australian society. These policies include fostering the preservation and sharing of the cultural heritage of migrant communities, and maintenance of harmonious inter-group relations in Australia's multicultural society. The Department provides advice to a number of other departments whose responsibilities are particularly important within this context.

Departmental social workers and welfare officers provide information and advice, and, in more complex cases, professional counselling for migrants in their own language. They operate from the Regional Offices of the Department in the State capital cities with some outposted to migrant centres, voluntary welfare organisations and other centres in areas of high migrant density. They are also involved in community development work and provide consultancy services to other agencies assisting migrant settlement.

Departmental activities are complemented by those of social workers and welfare officers employed by voluntary agencies funded by Commonwealth grants administered by the Settlement Branch. In many respects these voluntary agencies are best placed to assist migrants. There has been an increase in the number of Grants-in-Aid for the employment of welfare workers by voluntary agencies from 140 to 200 in 1983–84.

The Department provides a free translation and interpreting service for migrants during the settlement period and offers a translation service to Commonwealth departments and other bodies for a fee. At the present time translation units are operating in Canberra, Sydney and Melbourne.

In 1973 a Telephone Interpreter Service (TIS) was introduced to help overcome communication problems by providing over the telephone, in a wide range of languages, a general interpreting, information and referral service for migrants and others having dealings with migrants. Where necessary and especially in emergency situations, arrangements may be made for the personal attendance of an interpreter. TIS currently operates in Canberra, all State capitals, Darwin and in a number of major provincial centres of migrant population. During the year ended 30 June 1983, a total of 290,000 calls was received by TIS.

Cost-sharing agreements have been concluded with the Governments of New South Wales, Victoria, South Australia and Queensland for the establishment or extension of State operated interpreting and translation services. New arrangements are being negotiated with some other States and the Northern Territory.

A National Accreditation Authority for Translators and Interpreters (NAATI) was established by the Commonwealth Government in 1977 to develop standards of competence for translators and interpreters in Australia and to test and accredit at those standards. State/Territory Panels for Translators and Interpreters have been established in all States and Territories to administer tests to those seeking accreditation. From 1 July 1983 it became an independent body funded mainly by the Commonwealth and States on a shared basis.

Twenty migrant resource centres and eight sub-centres have been established in areas of high migrant density. These resource centres provide support for all agencies (both government and voluntary) which assist migrants, and also provide a focus for community participation and development of local resources to meet migrant needs.

The settlement of refugees particularly from Indo-China has become an important element in the Commonwealth Government's overall migrant settlement program. Most of these refugees are accommodated intitially at Commonwealth Government migrant centres where they are able to participate in an initial settlement program designed to facilitate their settlement in the community. In addition, under the Community Refugees Settlement Scheme, numbers of refugees are moved directly from the refugee camps overseas into the Australian community where they are in the care of families, groups and organisations which have undertaken to provide a range of support and assistance.

The Adult Migrant Education Program (AMEP) provides a wide range of language learning opportunities, as well as offering information about Australia, its services and institutions. The Department is responsible for the funding and co-ordination of the program at the national level, while service delivery is provided in the main by Adult Migrant Education Services in each State and Territory.

In 1982–83 expenditure on the Adult Migrant Education Program was $37,013,000. New enrolments in the Program nationally totalled just over 100,000 persons including 18,500 in courses for new arrivals.

The status of 'Australian citizen" was created under the *Nationality and Citizenship Act* 1948 which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act* 1948 and under its provisions all new settlers regardless of origin, are required to satisfy uniform requirements for the grant of citizenship. A major review of the Act, which included public consultations in every State and Territory, has recently been completed. Amendments are expected to be introduced into Federal Parliament during 1983–84. In the financial year 1982–83, 101,287 applications for Australian citizenship were received compared with 78,178 in 1981–82 and 69,907 in 1980–81. Over 1.5 million new settlers have been granted Australian citizenship since 1945.

Further information is contained in the *Department of Immigration and Ethnic Affairs Annual Review, Review '82.*

VETERANS' AFFAIRS

The Repatriation Commission, established under the *Repatriation Act* 1920, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the provision of benefits under the legislation. The Chairman of the Commission is also the Secretary of the Department of Veterans' Affairs (formerly the Department of Repatriation), which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of disability and dependants' pensions (previously called war pensions) and service pensions and allowances to eligible veterans and their dependants; the provision of medical treatment for veterans for injuries and illnesses accepted as service-related; the provision of medical treatment in certain circumstances for veterans who are suffering from injuries and illnesses whether service-related or not; the provision of medical treatment for war/ defence widows and certain dependants of deceased veterans; and provision of a wide range of other benefits for eligible persons. Since 5 October 1976, the *Defence Service Homes Act* 1918 has been administered by the Defence Service Homes Corporation (DSHC) (previously the Australian Housing Corporation) within the departmental framework. At the same time, the Department was given responsibility for the Office of Australian War Graves.

Repatriation benefits are provided in respect of service not only in the 1914–18 and 1939–45 Wars but also in the South African War 1899–1902, in the Korea and Malaya operations, in prescribed areas with the British Commonwealth Far East Strategic Reserve (F.E.S.R.) and the Special Overseas Forces and, in certain circumstances, in the Regular Defence Forces or peacekeeping forces.

For information on war service land settlement *see* Year Book No. 61 (Chapter 13, Agricultural Industries) and for statistics relating to defence service homes *see* Chapter 19, Housing and Construction, of this Year Book.

For detailed information about repatriation pensions, allowances, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

VETERANS' AFFAIRS (excl. DSHC): TOTAL EXPENDITURE(*a*)

($'000)

Class	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Pensions, allowances and other benefits	799,264	860,229	966,072	1,193,181	1,329,871	1,719,058
Medical treatment	251,589	268,539	310,327	357,219	426,360	499,005
Administration	41,999	44,441	49,539	54,971	68,541	75,271
Works, rent and maintenance	17,477	21,301	27,881	24,587	22,136	26,968
Total expenditure	**1,110,329**	**1,194,511**	**1,353,819**	**1,629,958**	**1,846,908**	**2,320,302**

(*a*) Includes expenditure by Departments other than Veterans' Affairs as follows: 1976–77, $13,710,296; 1977–78, $15,718,166; 1978–79, $18,819,531; 1979–80, $25,072,835; 1980–81, $21,270,359; 1981–82, $18,260,360; 1982–83, $22,738,924.

Disability pensions

The first provision for the payment of disability pensions to veterans and pensions to their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia during the 1939–45 War.

Main pension rates vary twice each year; current rates are available from Department of Veterans' Affairs Branch Offices.

Summary of disability pensions

The following table provides a summary of disability pensions according to the veteran's war/area of service. Statistics relating to miscellaneous disability pensions are included collectively in each table, with further details being provided later in this section.

DISABILITY AND DEPENDANTS' PENSIONS: 1982–83

		1914–18 War	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total*
Pensions in force at 30 June 1983 (*b*)	No.	28,056	340,015	9,340	22,523	10,318	221	410,473
Annual pension liability at 30 June 1983	$'000	75,936	520,056	8,828	8,743	4,261	437	618,261
Amount paid in pensions during the year 1982–83	$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	646,470
New claims granted	No.	203	8,723	321	1,497	2,652	24	13,420
Restorations	"	5	758	93	132	64	2	1,054
Pensions cancelled (gross)	"	33	3,496	446	543	320	8	4,846
Deaths of pensioners	"	3,023	8,623	93	49	18	9	11,815

(*a*) Includes Interim Forces. (*b*) Includes 4,285 student children over 16 years of age.

Classes of disability pensions

The following tables provide an analysis of the number of pensions in force, veteran's class of pension, new claims and deaths for 1982–83.

DISABILITY PENSIONS IN FORCE: 30 JUNE 1983

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total (b)*
Veterans	4,173	149,002	4,003	7,206	3,899	72	168,355
Wives and wives (widows)	10,900	140,964	3,234	5,514	2,698	75	163,385
Children (*b*)	8	8,522	1,603	9,316	3,481	6	22,936
War widows	12,700	38,841	359	195	113	66	52,274
Children of deceased veterans	1	473	68	190	122	–	854
Orphans	–	32	2	8	4	–	46
Other dependants	274	2,181	71	94	1	2	2,623
Total	**28,056**	**340,015**	**9,340**	**22,523**	**10,318**	**221**	**410,473**

(*a*) Includes Interim Forces. (*b*) Includes 3,797 student children over 16 years of age.

DISABILITY PENSIONS FOR INCAPACITATED VETERANS IN FORCE: BY CLASS OF PENSION 30 JUNE 1983

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscellaneous*	*Total*
Special Rate (T & P I) or equivalent	1,057	16,401	269	144	51	8	17,930
Intermediate Rate	34	1,287	30	15	1	–	1,367
General Rate—from 10 per cent to 100 per cent assessed disability	3,082	131,314	3,704	7,047	3,847	64	149,058
Total	**4,173**	**149,002**	**4,003**	**7,206**	**3,899**	**72**	**168,355**

(*a*) Includes Interim Forces

DISABILITY PENSIONS: NEW CLAIMS GRANTED, 1982–83

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscel-laneous*	*Total*
Veterans	42	2,866	94	370	991	10	4,373
Wives and widows of veterans	161	5,293	140	382	724	9	6,709
Children	–	545	85	740	936	5	2,311
Other dependants	–	19	2	5	1	–	27
Total	**203**	**8,723**	**321**	**1,497**	**2,652**	**24**	**13,420**

(*a*) Includes Interim Forces.

DISABILITY PENSIONS: DEATHS 1982–83

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and F.E.S.R.*	*Special Overseas Service*	*Peace time forces*	*Miscel-laneous*	*Total*
Veterans	880	5,460	66	37	13	2	6,458
Wives and widows of veterans	2,120	2,977	27	10	4	6	5,144
Children	–	7	–	2	1	–	10
Other dependants	23	179	–	–	–	1	203
Total	**3,023**	**8,623**	**93**	**49**	**18**	**9**	**11,815**

(*a*) Includes Interim Forces.

Number of disability pensions and expenditure, States and Australia

The following table shows the number of pensions in force and expenditure to 30 June 1983, according to place of payment.

DISABILITY PENSIONS: NUMBER OF PENSIONS AND ANNUAL EXPENDITURE

	Number of disability pensions in force at 30 June 1983(a)				
Place of payment	*Incapacitated veterans*	*Dependants of incapacitated veterans*	*Dependants of deceased veterans*	*Total*	*Annual expenditure (b) ($'000)*
New South Wales(*c*)	60,841	65,153	20,228	146,222	249,540
Victoria	40,281	45,390	15,225	100,896	161,800
Queensland	29,670	33,574	8,411	71,655	105,016
South Australia(*d*)	15,525	17,470	4,831	37,826	52,581
Western Australia	14,149	16,390	4,187	34,726	44,394
Tasmania	7,062	7,836	1,907	16,805	28,887
Overseas	827	1,046	470	2,343	4,252
Total	**168,355**	**186,859**	**55,259**	**410,473**	**646,470**

(*a*) Includes Interim Forces. (*b*) Includes domestic allowance payable to widows. (*c*) Includes Australian Capital Territory. (*d*) Includes Northern Territory.

Summary of disability pensions, 1977–78 to 1982–83

The following table shows the number of pensions granted, pensions in force and the expenditure for disability pensions in each of the years ended 30 June 1977 to 1983.

DISABILITY PENSIONS

Year	Pensions granted	Deaths	Number of disability pensions in force at 30 June(*a*) Incapacitated veterans	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	Annual expenditure(*b*) ($'000)
1977–78	8,039	11,390	187,427	220,968	54,291	462,686	419,033
1978–79	7,257	11,500	182,988	212,177	53,136	448,301	415,329
1979–80	6,141	11,151	178,471	204,265	52,031	434,767	432,001
1980–81	6,732	11,680	174,278	197,603	51,453	423,334	496,310
1981–82	7,325	11,648	170,546	190,970	51,614	413,130	510,675
1982–83	13,420	11,815	168,355	186,859	55,259	410,473	646,470

(*a*) Includes Interim Forces 1939–45 War. (*b*) Includes domestic allowance payable to widows.

Miscellaneous disability pensions

The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940, the *Papua New Guinea* (*Members of the Forces Benefits*) *Act* 1957 and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war-time.

The following table shows the number and class of pensions and the annual liability at 30 June 1983.

MISCELLANEOUS DISABILITY AND DEPENDANTS' PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, 30 JUNE 1983

Class	Number of pensions in force at 30 June 1983 Veterans(*a*)	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	Annual liability(*b*) ($'000)
Seamen's war pension	69	80	36	185	
New Guinea civilians	2	1	32	35	
Total	**71**	**81**	**68**	**220**	

(*a*) 'Veterans', in this context, are persons in respect of whose war-time experience a pension is paid. (*b*) Includes domestic allowances payable to widows.

Service pensions

The *Repatriation Act* 1920 provides for a service pension to be paid (subject to an income test unless the person is blind) to the following persons:

- male veterans who served in a theatre of war (or in a designated *Operational* or *Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
- female veterans who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable;
- veterans of the South African War 1899–1902 who were members of a naval or military force or contingent raised in Australia for active service in that war;
- veterans of other British Commonwealth Forces who served outside the country of enlistment or within that country if a campaign medal has been awarded in respect of such service. Ten years residence in Australia is a necessary qualification;
- veterans who served in formally raised allied forces in conflicts in which Australia participated, who served in a theatre of war and at no time served in enemy forces. Ten years residence in Australia is also necessary.

British Commonwealth and Allied mariners who served in a theatre of war in the 1939–45 war and who satisfied the ten year residency requirement are eligible as from 3 February 1983.

A veteran in receipt of a service pension is entitled, subject to an income test, to free medical benefits for disabilities not service-related. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment, and treatment in Repatriation General Hospitals.

Main pension rates vary twice each year; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following table provides a summary of Service Pensions according to the veteran's war/area of service.

SERVICE PENSIONS 1982–83

		1914–18 War	*1939–45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Common-wealth*	*Allied Forces*	*Miscel-aneous*	*Total*
New claims granted	No.	185	46,048	543	230	8,030	1,176	800	57,012
Restorations	"	2	135	10	4	17	4	—	172
Cancellations (gross)	"	213	5,349	69	20	479	51	25	6,206
Deaths	"	1,407	7,624	64	8	418	72	11	9,604
Pensions in force at 30 June 1983	"	8,682	295,689	2,085	547	28,849	4,235	1,061	341,148
Annual liability at 30 June 1983	$'000	28,417	756,051	7,190	1,835	96,587	13,720	3,512	907,312
Amount paid in pensions during 1982–83	$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	105,795

Class of service pensions

The following tables give an analysis of the total number of pensions in force, new claims granted and deaths for 1982–83.

SERVICE PENSIONS: NUMBER IN FORCE, 30 JUNE 1983

Class	*1914–18 War*	*1939–45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Common-wealth*	*Allied Forces*	*Miscell-aneous*	*Total*
Veterans—								
old age	5,624	140,308	508	51	14,838	2,193	535	164,057
permanently unemployable	679	31,898	776	274	1,596	172	84	35,479
Tuberculosis(*a*)	16	917	14	1	8	–	–	956
Total	*6,319*	*173,123*	*1,298*	*326*	*16,442*	*2,365*	*619*	*200,492*
Wives and widows	2,363	122,566	787	221	12,407	1,870	442	140,656
Total	**8,682**	**295,689**	**2,085**	**547**	**28,849**	**4,235**	**1,061**	**341,148**

(*a*) Eligibility on these grounds ceased on 2 November 1978.

SERVICE PENSIONS: NEW CLAIMS GRANTED 1982–83

Class	*1914-18 War*	*1939-45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Common-wealth*	*Allied Forces*	*Miscell-aneous*	*Total*
Veterans	81	25,361	321	139	4,457	611	462	31,462
Wives and widows	104	20,687	222	91	3,573	535	338	25,550
Total	**185**	**46,048**	**543**	**230**	**8,030**	**1,176**	**800**	**57,012**

SERVICE PENSIONS: DEATHS 1982-83

Class	*1914-18 War*	*1939-45 War*	*Korea-Malaya operations*	*Special Overseas Service*	*British Common-wealth*	*Allied Forces*	*Miscell-aneous*	*Total*
Veterans	1,243	6,408	51	8	334	45	9	8,098
Wives and widows	164	1,216	13	–	84	27	2	1,506
Total	**1,407**	**7,624**	**64**	**8**	**418**	**72**	**11**	**9,604**

Number of Service Pensions and Expenditure, States and Total

The following table shows the number of pensions in force and expenditure to 30 June 1983 according to place of payment.

SERVICE PENSIONS: NUMBER IN FORCE AT 30 JUNE 1983 AND ANNUAL EXPENDITURE 1982–83

State	Pensions in Force Veterans	Wives and widows	Total	Annual expenditure ($'000)
New South Wales(*a*)	67,208	47,064	114,272	357,650
Victoria	49,281	34,619	83,900	258,570
Queensland	36,786	26,095	62,881	196,924
South Australia(*b*)	21,029	14,957	35,986	110,202
Western Australia	17,448	11,898	29,346	90,417
Tasmania	8,118	5,620	13,738	42,347
Overseas	622	403	1,025	1,840
Total	**200,492**	**140,656**	**341,148**	**1,057,950**

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

The following table provides a summary of Service Pensions.

SERVICE PENSIONS

	Pensions granted	Deaths	Pensions in Force Veterans	Dependants	Total	Annual expenditure ($'000)
1977–78	37,491	7,092	118,955	69,562	188,517	372,100
1978–79	36,607	7,827	131,792	80,630	212,422	436,196
1979–80	40,735	7,952	146,370	93,594	239,964	525,178
1980–81	46,189	8,966	163,237	108,841	272,078	686,487
1981–82	42,766	8,894	178,064	121,838	299,902	807,537
1982–83	57,012	9,604	200,492	140,656	341,148	1,057,950

Medical treatment for veterans and dependants of veterans

Medical treatment is provided for all disabilities which have been accepted as service-related, and for pulmonary tuberculosis and cancer not related to service. In addition, and subject to certain conditions, treatment is provided for most non-service-related disabilities for: incapacitated veterans receiving disability pensions at or above the maximum (100 per cent) General Rate; 1939–45 War veterans receiving both service pension at any rate and disability pension at the 50 per cent rate or higher; veterans or nurses who served in the 1914–18 War; veterans of the Boer War; ex-prisoners-of-war; war widows and certain other dependants of deceased male veterans whose deaths have been accepted as service-related, and of deceased Special Rate pensioners; and certain service pensioners.

Treatment is provided at six Repatriation general hospitals (one in each State) and three auxiliary hospitals and an ANZAC hostel in Victoria. The total number of available beds for patients in wards or parts of wards open for use in all these institutions at 30 June 1983 was 2,795 and expenditure during 1982–83 amounted to $193,147,811. In addition, expenditure of $305,857,361 was incurred during 1982–83 on medical services outside these institutions.

Community patients

Where spare bed capacity exists in the Repatriation hospitals, patients may be admitted from the general community to a level not exceeding 20 per cent of the total occupied beds of the hospital over a period of time.

Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME OPERATIVE STAFF 30 JUNE 1983

Type of institution	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*N.T.*	*Aust.*
General hospitals . .	2,414	1,519	1,105	738	822	203	–	–	6,801
Other in-patient institutions	260	132	77	–	–	–	–	–	469
Limb and appliance centres	67	71	26	22	15	12	1	1	215
Total	**2,741**	**1,722**	**1,208**	**760**	**837**	**215**	**1**	**1**	**7,485**

The following table gives details of in-patients treated at Repatriation general hospitals and other Repatriation institutions in each State. The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS TREATED, 1982–83

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.*
REPATRIATION GENERAL HOSPITALS							
In-patients at beginning of year . .	648	376	369	249	269	84	1,995
Admissions and re-admissions during year	18,757	15,092	10,633	6,898	9,137	2,022	62,539
Total in-patients treated .	*19,405*	*15,468*	*11,002*	*7,147*	*9,406*	*2,106*	*64,534*
Discharges	18,033	14,386	10,205	6,603	8,792	1,910	59,929
Deaths	714	632	412	289	312	104	2,463
In-patients at end of year	658	450	385	255	302	92	2,142
Average daily beds occupied . .	602	406	342	222	268	68	1,909
REPATRIATION AUXILIARY HOSPITALS							
In-patients at beginning of year . .	132	106	63	—	—	—	301
Admissions and re-admissions during year	1,898	731	599	—	—	—	3,228
Total in-patients treated .	*2,030*	*837*	*662*	—	—	—	*3,529*
Discharges	1,797	642	544	—	—	—	2,983
Deaths	61	69	59	—	—	—	189
In-patients at end of year	172	126	59	—	—	—	357
Average daily beds occupied . .	154	117	57	—	—	—	328

In addition to the repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at departmental expense. During 1982–83, 46,575 Repatriation in-patients were accommodated and treated in country and metropolitan hospitals and 6,635 in nursing homes.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department of Veterans' Affairs in separate wings of psychiatric hospitals administered by the State authorities. Excluding 35 on trial leave, there were 442 repatriation patients in these hospitals at 30 June 1983.

Out-patient treatment is provided throughout Australia at repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1982–83, 755,256 out-patients were treated at Repatriation institutions, and local medical officers consultations totalled 2,807,552. The number of Repatriation local medical officers in Australia at 30 June 1983 was 10,866.

Artificial limb and appliance services

A wide range of artificial limbs and other surgical aids is supplied by the artificial limb and appliance centre in each State capital and Darwin. In addition, the Department maintains the Central Development Unit located in Melbourne, and engages in research and development in the prosthetic and orthotic field.

Since 1973, artificial limbs have been provided free of charge to all members of the community who need them (except where patients are eligible for compensation), either through the Department's artificial limb and appliance centres or on order through commercial limb-makers. The number of limbs supplied through the Department has increased significantly as the community has taken advantage of the free-limbs scheme.

Details of production at all centres during 1982–83 are as follows: arms, 180; legs, 2,399; surgical and adapted footwear, 6,212; other surgical appliances, 915; and repairs, 25,835. In addition the Department purchased from commercial manufacturers 211 legs, 146 arms and 5,917 limb repairs.

General Repatriation benefits and miscellaneous

Other activities of Department of Veterans' Affairs

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special classes of veterans and their dependants. These include the Soldiers' Children Education Scheme.

In addition, gift cars and an annual allowance for their upkeep are provided for veterans who, as a result of service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting in the total loss of the use of both legs. A grant of up to $500 may be made towards the funeral expenses of eligible veterans and certain of their dependants. As from 13 November 1980, Temporary Incapacity Allowance may be paid to a veteran whose stay in hospital together with post-hospital convalescence or other treatment on a full-time basis exceeds 28 days. Payment of up to $10 may be made to provide such necessities as meals, sleeping accommodation, etc., for veterans in need of immediate relief. Also, certain concessions in telephone rental charges are provided for some classes of veterans and their dependants, including blinded veterans, war and defence widows and certain service and Special Rate disability pensioners. Veterans who have been blinded as a result of service may be issued with talking book machines. The Australian Red Cross Society supplies 'book' records or cassettes for these machines free of charge, thus enabling the blind to enjoy a wide range of literature.

Expenditure in 1982–83 on general Repatriation benefits for all wars was $14,672,000 comprising Soldiers' Children Education Scheme, $2,572,000; recreation transport allowance, $1,286,000; and other benefits, $10,814,000.

As at 30 June 1982, trust and other funds administered by the Department of Veterans' Affairs held $56,000 in securities (face value) and $1,287,000 in cash, a total of $1,343,000.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian veterans living overseas and to eligible veterans from overseas who are living in Australia.

Soldiers' Children Education Scheme

The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of the honorary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organisations which have a general interest in the welfare of the children of veterans. The objects of the Scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional, or industrial calling of their own choice. Eligible children are children of veterans whose deaths have been accepted as service-related; or of veterans who died from causes not service-related but who were receiving at the date of death a disability pension at a Special Rate for blindness, total and permanent incapacity, or amputation of two or more limbs; or of veterans who, as a result of service, are blinded totally and permanently incapacitated. From the commencement of primary education until the child reaches twelve years of age, school requisites and fares are provided. From the commencement of secondary education or from the age of twelve years, whichever is earlier, an education allowance is payable while the child is undertaking primary or secondary education. Assistance beyond secondary education is provided where an approved beneficiary continues with a course of specialised education or training necessary for a career. At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits are provided.

All education allowances are subject to an income test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. Weekly rates of allowances vary from time to time; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following tables show the costs of education under the scheme for the year ended 30 June 1983, and the number of children in receipt of benefit at 30 June 1983.

SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1982–83

($'000)

	N.S.W.(a)	*Vic.*	*Qld*	*S.A.(b)*	*W.A.*	*Tas.*	*Aust.*
Cost of education of beneficiaries—							
Under 12 years of age	2.1	2.0	4.8	1.8	1.9	1.0	13.6
12 years of age and over	1,008.0	623.1	421.8	209.8	163.1	111.4	2,537.7
Total expenditure	**1,010.1**	**625.1**	**426.6**	**211.6**	**165.0**	**112.4**	**(c)2,551.3**

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory. (*c*) Excludes overseas expenditure of $20,500.

SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS AT 30 JUNE 1983

Type of training	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.(b)*	*W.A.*	*Tas.*	*Over-seas*	*Total*
At school—								
Primary (*c*)	143	69	116	42	41	29	–	440
Secondary	475	231	255	111	71	72	8	1,223
Total at school	*618*	*300*	*371*	*153*	*112*	*101*	*8*	*1,663*
Tertiary/professional	200	137	85	60	35	27	3	547
Technical	38	54	14	–	9	9	–	124
Industrial	26	11	3	17	5	15	–	77
Grand total	**882**	**502**	**473**	**230**	**161**	**152**	**11**	**2,411**

(*a*) Includes A.C.T. (*b*) Includes N.T. (*c*) Not in receipt of an education allowance.

Re-establishment benefits for former regular servicemen

Subject to prescribed conditions, vocational training and business loans are provided for former regular servicemen with a view to ensuring that they are not at a disadvantage when they return to civil life. Loans from $5,000 (business and professional) and $10,000 (agricultural) may be granted to veterans in these categories who satisfy prescribed requirements in respect of suitability of their proposed business propositions and adequacy of security. Agricultural loans are administered by the Department of Primary Industry. Vocational training is provided for by the Department of Employment and Industrial Relations.

Survey of Ex-service personnel, widows and children

In November 1971, a survey based on the quarterly population survey (*see* Chapter 8, Manpower) was conducted at the request of the then Department of Repatriation and the Services Canteen Trust Fund. Details of the survey were published in Year Book No. 59, page 112 and in the publication *Ex-service Personnel, Widows and Children* (*November 1971*) (4403.0). A similar survey was conducted in October 1979, and included questions relevant to the Defence Service Homes function. Results were published in April 1980.

The Services Canteens Trust Fund

The Services Canteens Trust Fund was established under the *Services Trust Funds Act* 1947. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31 December 1982 was $11,087,682. The Act prescribed that of this, $5 million and such further amounts as the trustees of the Fund might from time to time decide should be devoted to the provision of education facilities for the children of eligible veterans, and that the balance of the Fund should be used to provide relief for veterans and their dependants in necessitous circumstances.

The Fund is administered by seven honorary trustees appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of the benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939–45 War or are widows of men who served during the war. The trustees and members of regional committees serve in an honorary capacity.

Assistance from the Fund

Persons eligible for assistance from the Fund are those who, between 3 September 1939 and 30 June 1947, served in the Australian Naval, Military or Air Forces, including members of the canteens staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Forces who served in an official capacity on full-time paid duty, and their dependants.

The trustees have introduced various schemes for providing financial assistance to needy eligible veterans and their dependants. The total cash assistance granted to individuals under all schemes from the inception of the Fund to 31 December 1982 was $17,191,753 ($481,680 during 1982) distributed as follows:

- welfare relief, $6,002,781 ($305,792 during 1982)
- children's education, $10,798,280 ($175,440 during 1982)
- other schemes, $390,692 ($438 during 1982)

For detailed information on the operation of the Fund, reference should be made to the annual reports of the Services Canteens Trust Fund.

BIBLIOGRAPHY

ABS Publications

Monthly Summary of Statistics, Australia (1304.0)
Social Indicators, Australia (4101.0)
National Accounts, National Income and Expenditure (5204.0)
Commonwealth Government Finance (5502.0)
State and Local Government Finance, Australia (5504.0)

CHAPTER 10

HEALTH

This chapter is primarily concerned with the activities of the Commonwealth relating to health. There is, however, government responsibility for health at the State and local levels. There are constitutional limits on the Commonwealth Government's role in the health care field, and the primary responsibility for planning and provision of health services is with the State and Territory Governments.

At the national level, health services in Australia are controlled by the Commonwealth Government. The Government appoints a Minister for Health, who exercises political control over the Commonwealth Department of Health, headed by the Director-General. The Commonwealth Government is primarily concerned with the formation of broad national policies, and influences policy making in health services through its financial arrangements with the State and Territory Governments, through the provision of benefits and grants to organisations and individuals, and through the regulation of health insurance.

The direct provision of health services, broadly speaking, is the responsibility of the State Governments. Each of the States and the Northern Territory has a Minister of Health who is responsible to the government of his particular State or Territory for the administration of its health authorities. In some States, the responsibility for health services is shared by several authorities whilst in others, one authority is responsible for all these functions.

Health care is also delivered by local government, semi-voluntary agencies, and profit making non-governmental organisations.

Capital Territory Health Commission.

In addition to its national responsibilities, the Commonwealth Government, through the Capital Territory Health Commission, has special responsibility for health services in the Australian Capital Territory. The Commission, which is primarily funded through Commonwealth appropriations, has the statutory role of providing and monitoring health services in the A.C.T.

Health services provided by the Commission include:

- Hospital services.

The Commission operates Royal Canberra and Woden Valley Hospitals within the A.C.T. public hospital system. These hospitals offer an extensive range of general and speciality medical services. Calvary Hospital and the Queen Elizabeth II Home for Mothers and Babies are funded through the Commission's grant-in-aid program, and function within the public hospital system.

- Community services

The Commission is responsible for health care delivery in the community, including health centres (eleven as at 30 June 1983), child health clinics and home nursing services. Other community health services provided by the Commission include ambulance services, health education, school dental and speech therapy services, health and pharmaceutical inspection services, and services associated with occupational health and safety. The Commission also provides a range of programs to service the mental health needs of the community, and the special health needs of other groups in the community such as the elderly and physically handicapped.

At 30 June 1983, the Commission had a staff of 3,286 full-time and 715 part-time employees.

Further information about the operations of the Commission and the services it provides is contained in Commission annual reports.

COMMONWEALTH HEALTH BENEFITS AND ASSISTANCE

Medicare

In February 1984 the Commonwealth Government introduced the new Commonwealth financed universal hospital and medical benefits scheme known as Medicare. Details of Commonwealth Medical and Hospital benefits and private health insurance arrangements operating prior to 1 February 1984 are available in Year Book 67—1983. The revised health financing arrangements under the Medicare program feature the following major elements:

- automatic entitlement under a single public health fund to medical and optometrical benefits of 85 per cent of the Medical Benefits Schedule fee, with a maximum patient payment for any service of $10 where the scheduled fee is charged;
- access without direct charge to public hospital accommodation and to inpatient and outpatient treatment by doctors appointed by the hospital;
- the restoration of funds for community health to approximately the same real level as 1975;
- the reduction in charges for private treatment in shared wards of public hospitals to $80 per day; and
- increases in the daily bed subsidy payable to private hospital to an average of $30.

The Medicare program is financed in part by a 1 per cent levy on taxable incomes, with low income cut-off points. The tax rebate formerly paid for basic health insurance contributions ceased from 30 June 1983. In addition, the Commonwealth's annual contribution to the Hospital Benefits Reinsurance Trust Fund was reduced from $100 million to $20 million.

To facilitate the introduction of the Medicare program amendments were necessary to the following Commonwealth legislation:

- National Health Act;
- Health Insurance Act;
- Health Insurance Commission Act; and
- States (Tax Sharing and Health Grants) Act

and certain tax-related legislation.

The Levy

The concept of a 1 per cent levy on all taxable incomes reflects the policy that health care should be related to the individual's ability to pay. As at 1 February 1984 no levy was payable by single people earning less than $128.80 per week or by sole parents (with one dependant child) and married couples with a combined income of not more than $214.25 per week. This latter figure increases by $21.15 per week for each dependant child. There is also a maximum levy payable. This is reached at a single or combined husband and wife income of $70 000 per annum or $1 346 per week. The low income cut-off points were set to ensure that no person who, prior to the introduction of the program, held a Pensioner Health Benefit Card or a Health Care Card, would pay a levy.

Eligibility for Medicare Benefits

Medicare benefits are available to all persons ordinarily resident in Australia with the exception of members of foreign diplomatic missions and their dependants.

Eligibile people include:

- All permanent Australian residents (including Repatriation beneficiaries and Defence Force Personnel);
- people visiting Australia who obtain approval to stay for at least 6 months—with eligibility to date from arrival in Australia;
- people visiting Australia who originally obtain approval to stay less than 6 months, but are granted an extension which makes the total approved stay more than 6 months—with eligibility to date from when the extension was granted;
- people visiting Australia who are residents of countries with whom Australia may negotiate a reciprocal health care agreement;
- Australian residents receiving medical services while travelling overseas.

Short-term visitors to Australia (i.e. less than 6 months) are responsible for the full cost of their medical and hospital treatment. Such people should make some form of private insurance arrangements to cover such costs.

Medical Benefits

The Health Insurance Act provides for a Medical Benefits Schedule which lists medical services and the Schedule (standard) fee applicable in each State in respect of each medical service. The Schedule covers services attracting Medicare Benefits rendered by legally qualified medical pracitioners, certain prescribed medical services rendered by approved dentists in the operating theatres of approved hospitals, and optometrical consultations by participating optometrists. Schedule fees are set and updated by an independent fees tribunal which is appointed by the Government. The fees so determined are to apply for Medicare benefits purposes. Medical services in Australia are generally delivered by either private medical practitioners on a fee-for-service basis, or medical practitioners employed in hospitals.

Where a medical service is provided by a private medical practitioner on a fee-for-service basis, Medicare refunds 85 per cent of the Medical Benefits Schedule fee cost or, the Schedule fee less $10, whichever is the greater. It is not possible to insure with private health insurance organisations to cover the 15 per cent 'gap'. However, should an individual accumulate 'gap' payments in excess of $150 per year, Medicare will pay benefits at 100 per cent of the Schedule fee.

Under Medicare, medical practitioners are able to direct bill for any patient. In such cases, they receive the Medicare benefit as full payment. Previously, direct billing was limited to services rendered to eligible Pensioner Health Benefit and Health Care Cardholders, and their dependants.

Hospital Care

From 1 February 1984, basic public hospital services have been provided free of charge. Through Medicare grants to the States the cost of out-patient treatment and inpatient accommodation and care in a shared ward by a doctor employed by a hospital are covered. The scheme does not cover the cost of private accommodation in a public hospital, charges for private hospital treatment, nor care in a public hospital by a doctor of the patient's choice. It is possible however for persons to take out insurance with private health funds to cover these situations.

Patients who are accommodated in either private or public hospitals for extended periods and who are, in essence, nursing home type patients, are required to make a non-insurable patient contribution in the same way that a patient in a nursing home does. For a private patient in a public hospital, private health fund benefits are reduced to the level of the standard nursing home benefit. In a private hospital, the fund benefits are reduced by the amount of the patient contribution.

Under Medicare, the amended arrangements provide that the period of time of continuous hospitalisation before classification as a nursing home type patient has been reduced from 60 to 35 days.

Where a patient's doctor considers that a patient has continuing need for acute hospital care, the doctor may issue a certificate under section 3B of the Health Insurance Act to that effect, and the nursing home type patient arrangements do not apply. The new arrangements provide for a review mechanism in the form of the Acute Care Advisory Committee which may review such certificates and recommend that they be affirmed, varied or revoked.

Private Hospitals

Since 1 February 1984 both the Commonwealth bed day subsidy and the hospital insurance benefit for private hospital accommodation have been paid according to a system of classification consisting of three categories:

Category 1 hospitals receive a $120 basic private fund benefit and a $40 Commonwealth daily bed subsidy;

Category 2 hospitals receive a $100 basic private fund benefit and a $30 Commonwealth daily bed subsidy; and

Category 3 hospitals receive a $80 basic private fund benefit and a $20 Commonwealth daily bed subsidy.

Private hospitals are classified into the three categories according to the services and facilities provided. Those hospitals with more sophisticated services and facilities attract a higher level of insurance benefit and Commonwealth bed day subsidy.

Commonwealth Nursing Home Benefits

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the National Health Act. These benefits are as follows:

(a) **Basic Nursing Home Benefit**

The Commonwealth pays basic nursing home benefits in respect of all qualified nursing home patients other than those who are entitled to damages or compensation. Basic benefit levels are reviewed and adjusted annually in each State to a level whereby the fees charged in respect of 70 per cent of beds in non-Government nursing homes, approved under the National Health Act, (i.e. participating nursing homes) are covered by the sum of the benefit plus statutory minimum patient contribution (explained below). As at 3 November 1983, the maximum amount of basic nursing home benefit payable per day in each State and Territory was: New South Wales and Australian Capital Territory $32.35; Victoria $45.15; Queensland $26.65; South Australia and Northern Territory $37.80; Western Australia $23.40; and Tasmania $27.00.

(b) Commonwealth Extensive Care Benefit

The Commonwealth extensive care benefit is payable at the rate of $6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. Application must be made for payment of the extensive care benefit. As in the case of the Commonwealth basic benefit, the extensive care benefit is only payable in respect of qualified patients who are not entitled to damages or compensation.

Minimum Patient Contribution

All participating nursing home patients are normally required to make a statutory minimum contribution towards the cost of their accommodation in the nursing home. Patients are required to make this contribution towards the cost of their accommodation and care in recognition of those costs which would otherwise be incurred outside the nursing home in any alternative long-term residence.

The statutory minimum patient contribution equals 87.5 per cent of the sum of the standard single rate pension plus the supplementary assistance, and at 3 November 1983 was $11.95 a day.

Where the fees charged by a participating nursing home are in excess of the combined total of nursing home benefits plus the statutory minimum patient contribution, the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the basic benefit paid by the Commonwealth is reduced by that amount.

Fees charged to patients in Government nursing homes are determined by State Governments. Patients in these homes also attract basic and extensive care benefits from the Commonwealth Government, and the patient contribution is usually about the same as the statutory minimum patient contribution described above.

Deficit Financing Arrangements

As an alternative to the provision of Commonwealth nursing home benefits under the National Health Act (as outlined above), the *Nursing Homes Assistance Act* 1974 provides for direct funding of nursing homes conducted by local government and charitable and benevolent organisations.

Under the deficit financing arrangements the Commonwealth meets the approved operating deficits and the cost of approved asset replacements of these nursing homes. Financial assistance is provided by way of monthly advances based on a budget approved by the Commonwealth Department of Health. An annual settlement is effected when audited financial statements are forwarded to the Department.

Nursing homes wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Commonwealth Government for that purpose. Patients in deficit-financed nursing homes are required to pay a prescribed fee equivalent to the statutory minimum patient contribution, although provision exists to reduce this contribution in appropriate cases such as homes caring for children. Higher fees are prescribed for patients entitled to damages or compensation.

APPROVED NURSING HOMES AND BEDS—STATES AND TERRITORIES, 30 JUNE 1983

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Approved nursing homes—									
Deficit financed(*a*)	130	73	71	57	27	28	1	–	387
Government(*b*)	32	70	21	5	25	5	2	2	162
Other(*c*)	352	237	108	88	72	17	2	2	878
Total	514	380	200	150	124	50	5	4	1,427
Beds in—									
Deficit financed nursing homes	6,302	2,898	3,582	2,642	1,206	829	55	–	17,514
Government nursing homes	3,391	5,188	2,445	1,141	1,736	840	54	274	15,069
Other nursing homes	18,991	7,901	5,597	3,248	3,600	611	50	131	40,129
Total	28,684	15,987	11,624	7,031	6,542	2,280	159	405	72,712
Beds per 1000 population	*5.4*	*4.0*	*4.7*	*5.3*	*4.8*	*5.2*	*1.2*	*1.7*	*4.7*

(*a*) Deficit financed homes approved under the Nursing Homes Assistance Act for the payment of their approved operating deficits. (*b*) Government homes approved under the National Health Act for the payment of nursing home benefits. (*c*) Private profit and voluntary non-profit homes approved under the National Health Act for the payment of nursing home benefits.

Source: Commonwealth Department of Health.

Other Commonwealth Nursing Benefits

Domiciliary Nursing Care Benefit

The Commonwealth Government provides a Domiciliary Nursing Care Benefit to assist people who choose to care, in their own homes, for chronically ill or infirm relatives who would require admission to a nursing home if this care in their own home was not available. Patients who qualify for this Benefit are, typically, those people who are incapable of caring for themselves and of being left unsupervised for any significant period.

The basic criteria for the payment of the Benefit are that the patient must be aged 16 years or over and be in need of and in receipt of continuing care, and also be receiving regular visits by a registered nurse. The Benefit is payable at the rate of $42 per fortnight.

Home Nursing Subsidy Scheme

The Scheme was introduced in 1956 to encourage the growth and development of home nursing services in Australia. The subsidy is paid in respect of each eligible nurse employed. An organisation must be a non-profit service to be eligible for the subsidy.

It is a condition of subsidy that the State and/or local government provide at least matching assistance. If they pay less the Commonwealth subsidy is reduced accordingly. During 1982–83, subsidies totalling $19.9m were paid to 196 approved organisations providing home nursing services in the States.

Other Commonwealth Benefits Schemes

Assistance to Isolated Patients

The *Isolated Patients Travel and Accommodation Assistance Scheme*, which is wholly funded by the Commonwealth Government, provides partial financial assistance to residents of isolated areas required to travel in excess of 200 kilometres to obtain specialist medical practitioner treatment, not locally available. Benefits are also available in certain circumstances for hospital treatment by oral surgeons, and in respect of cleft lip and palate patients under 22 years of age for journeys associated with orthodontic and associated dental care. In 1982–83 Government expenditure on the Scheme totalled $9.2 million, which involved the payment of benefits to some 70,000 persons. These figures represent increases of 46 per cent and 29 per cent respectively over those for 1981–82.

Tuberculosis

An arrangement between the Commonwealth and the States under which the Commonwealth reimbursed the States for all approved capital expenditure on tuberculosis and for net maintenance expenditure to the extent that it exceeded that for 1947–48 was discontinued from 31 December 1976. The National Tuberculosis Advisory Council, however, has been retained to keep abreast of advances and to advise the Minister for Health and, through him, the State Ministers for Health on the best means of prevention, diagnosis and control of tuberculosis. There are eleven members of the Council, the chairman being the Director-General of the Commonwealth Department of Health.

To reduce the spread of infection the Commonwealth Government pays allowances to persons suffering from infectious tuberculosis so that they may give up work and undergo treatment. Commonwealth Government Expenditure on Tuberculosis Allowances over the last three years has been $1,317,000 in 1980–81, $1,103,200 in 1981–82 and $945,630 in 1982–83.

Pharmaceutical Benefits Scheme

Under the Pharmaceutical Benefits Scheme, assistance is provided towards the cost of a comprehensive range of drugs and medicines to persons receiving treatment from a medical practitioner. From 1 April 1979, the Scheme was expanded to allow dentists, who are approved as participating dental practitioners, to prescribe a limited range of drugs for dental treatment of their patients. The drugs and medicines are supplied by an approved chemist upon presentation of a prescription from the patient's medical or dental practitioner, or by an approved hospital to patients receiving treatment at the hospital.

From 1 January 1983 patient contribution arrangements are applicable as follows:

- *free of charge*—pensioners with Pensioner Health Benefits cards and their dependants receive benefit items free of charge;
- *$2 per benefit item*—people in special need who hold Health Care cards and their dependants, and those Social Security pensioners and Veterans' Affairs service pensioners who do not hold a PHB card and their dependants, pay a contribution of $2 per benefit item;

- *$4 per benefit item*—all other people pay a contribution of $4 per benefit item.

Under the Pharamecutical Benefit Scheme the total cost, including patient contributions, for prescription drugs was $526.0 million in 1981–82 and $591.5 million in 1982–83. These figures do not include benefits supplied by certain hospitals and miscellaneous services or retrospective adjustments of chemists' remunerations.

BENEFIT PRESCRIPTIONS AND COST OF MORE FREQUENTLY PRESCRIBED DRUG GROUPS, AUSTRALIA, 1982–83

	Benefit prescriptions		*Total cost of benefit prescriptions(a)*	
Drug group	*Number*	*Percentage of total*	*Amount*	*Percentage of total*
	'000	%	$'000	%
Analgesics	13,053	12.4	71,003	12.0
Diuretics	9,086	8.6	42,173	7.1
Heart—Drugs acting on	7,773	7.4	66,183	11.2
Penicillins	7,696	7.3	41,922	7.1
Bronchial spasms—Preparations for	6,232	5.9	37,408	6.3
Anovulants	5,378	5.1	24,125	4.1
Tranquillisers	4,438	4.2	17,996	3.0
Blood vessels—Drugs acting on	4,208	4.0	34,082	5.8
Sulphonamides	3,921	3.7	18,883	3.2
Tetracyclines	3,907	3.7	21,840	3.7
Antidepressants	3,534	3.4	15,416	2.6
Hypnotics and sedatives	2,795	2.7	9,352	1.6
Eye Drops	2,593	2.5	12,823	2.2
Antacids	2,295	2.2	9,428	1.6
Water and electrolyte replacement	2,243	2.1	11,282	1.9
Skin sedative applications	2,234	2.1	8,738	1.5
Erythromycin	2,208	2.1	11,424	1.9
Antihistamines	2,056	2.0	7,299	1.2
Vagina-urethra—Drugs acting on	1,793	1.7	8,745	1.5
Anti-emetics	1,412	1.3	4,856	0.8
Expectorants—cough suppressants	1,270	1.2	4,036	0.7
Skin fungicides	1,258	1.2	6,558	1.1
Other drug groups	14,202	13.5	105,936	17.9
Total	105,585	100.0	591,508	100.0

(*a*) Includes patients' contributions. Excludes Government expenditure in relation to pharmaceutical benefits provided through miscellaneous services.
Source: Commonwealth Department of Health.

Program of Aids for Disabled People

The principal aim of the Program of Aids for Disabled People (PADP) is to enable people with disabilities of a permanent or indefinite duration to live more independently in a domestic situation, with a consequent reduction in demand for more costly institutional care. Under the program, certain aids to daily living including wheelchairs, surgical shoes, braces, splints, calipers, surgical wigs, aids for incontinence, walking aids, personal aids (eating and cooking utensils, toilet articles) and basic home modifications (ramps, rails, grips, door widenings, etc.) may be provided to eligible people. PADP, which is wholly funded by the Commonwealth, is operated through health services networks administered by the State and Territory health authorities.

Summary of personal benefit payments

For an analysis by purpose and economic type of expenditure by all Commonwealth Government authorities *see* Chapter 22, Public Finance.

Most Commonwealth Government health benefits are financed through the National Welfare Fund and the Health Insurance Commission. The following table shows personal benefit payments by Commonwealth Authorities for 1981–82.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS—HEALTH 1981-82 ($'000)

	N.S.W. (a)	*Vic.*	*Qld*	*S.A. (a)*	*W.A.*	*Tas.*	*N.T. (a)*	*A.C.T. (a)*	*Total*
Hospital and clinical services—									
Hospital benefits reinsurance	35,468	31,300	14,400	16,100	1,200	1,100	—	1,537	101,105
Private hospital daily bed payments	23,548	23,615	16,332	8,876	7,686	2,489	786	1,021	84,353
Nursing home benefits	201,630	155,381	77,327	58,046	45,754	16,642	5,513	8,739	569,034
Tuberculosis campaign allowances	303	525	180	22	37	9	18	8	1,103
Rehabilitation of ex-servicemen	442	229	101	24	65	28	—	61	949
Total	*261,391*	*211,050*	*108,340*	*83,068*	*54,742*	*20,268*	*6,317*	*11,366*	*756,544*
Other health services—									
Medical benefits	321,628	189,286	106,288	68,537	55,945	17,857	3,902	9,384	772,826
Isolated patients travel and accommodation assistance	1,366	307	2,273	446	1,065	300	542	—	6,298
Pharmaceutical benefits for pensioners	98,481	57,410	38,907	20,263	16,939	6,356	213	1,325	239,895
Pharmaceutical benefits, n.e.c.	57,417	40,093	23,187	11,986	11,558	3,750	593	2,341	150,925
Domiciliary care	7,176	5,116	3,985	1,760	1,769	1,365	—	—	21,172
Total	*486,068*	*292,212*	*174,640*	*102,992*	*87,276*	*29,628*	*5,250*	*13,050*	*1,191,116*
Total health	**747,459**	**503,262**	**282,980**	**186,060**	**142,018**	**49,896**	**11,567**	**24,416**	**1,947,660**

(*a*) State totals for New South Wales and South Australia also include most of the unallocatable expenditure on personal benefit payments to residents in the Australian Capital Territory and the Northern Territory respectively.

Commonwealth Government subsidies and grants to States

General Revenue Grants

The Commonwealth provides untied identifiable health grants within general revenue grants to the States and the Northern Territory as a contribution towards the cost of health programs. These arrangements, which are authorised by the States (Tax Sharing and Health Grants) Act 1981, are designed to replace previous specific purpose health payments for public hospital operating costs (under expired Hospital Cost Sharing Agreements), community health and school dental service programs and apply fully to all States.

Medicare Grants to the States

Under the Medicare program, all States (including South Australia and Tasmania), the Northern Territory and the Australian Capital Territory, have been compensated by Medicare grants outside the identified health grants and tax sharing arrangements for:

- revenue losses and additional medical costs directly attributable to the provision of free public hospital accommodation and treatment; and
- a reduction to $80 per day in the fee charged for those persons who seek 'doctor of choice' or private ward accommodation in public hospitals.

As part of the Medicare arrangements, South Australia and Tasmania agreed to terminate their hospital cost sharing arrangements with the Commonwealth on 1 February 1984 and have been funded thereafter on the same basis as other States. Commonwealth hospital payments to both States in 1983-84 have, therefore, comprised:

- specific purpose assistance (hospital cost sharing agreements) for the period 1 July 1983 to 31 January 1984;
- since 1 February 1984, an additional component to their existing identified health grants (in respect of the community health program and school dental scheme) equal to the amount of grants they would otherwise have received had the cost sharing agreements continued; and
- since 1 February 1984, additional Medicare grants as outlined above.

As stated earlier the Medicare grants to the States and Northern Territory also include an additional community health component to restore the level of Community Health Grants to 1975-76 levels in real terms.

Under the Medicare arrangements, Queensland also received an additional special public hospital payment of $15m in 1983-84.

Paramedical services

The *States Grants* (*Paramedical Services*) *Act* 1969 provides for the Commonwealth Government to share on $1 for $1 basis with participating States the cost of approved paramedical services such as chiropody, occupational therapy, physiotherapy and speech therapy provided wholly or mainly for aged persons in their homes. Matching grant payments during 1982-83 amounted to $1,241,000.

Commonwealth Government subsidies and grants to organisations

Health Program Grants

Health Program Grants are lump sum payments to approved organisations in respect of the costs incurred by those organisations in providing approved health services. The grants were first introduced in 1975 with the intention of establishing a scheme for funding a wide range of health services on other than a fee-for-service basis. The scheme underwent several modifications in later years to allow for the provision of charges to be imposed, where appropriate, for services rendered to privately insured patients.

Since 1 February 1984, there has been a return to the original concept of health program grants in that they now cover the entire costs incurred by approved health services, and no charges are raised for those services.

Community Health Program—National Projects

Under the Community Health Program National Projects arrangements, the Commonwealth provides funding to organisations in respect of specific activity which has been approved for the purpose of the Program.

The largest of these projects is the Family Medicine Program (FMP) of the Royal Australian College of General Practitioners, which provides vocational training for young doctors who intend to enter general practice. The trainees receive their training through attachments to participating private general practitioner practices and by attendance at educational events organised by the FMP.

The other national projects are either national co-ordinating secretariats of voluntary non-profit organisations operating in more than one State or specific health-related projects which have national application.

Under the Medicare arrangements which commenced on 1 February 1984, the Commonwealth government expressed a renewed interest in community health services and provided block grants to the States and Territories amounting to an additional $7.3m in 1983-84 for new and expanded community health services within their borders.

For new projects at the national level, the Government also provided a further $0.8m in 1983-84.

Other Grants and Subsidies

The Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are:

The *Royal Flying Doctor Service* is a non-profit organisation providing medical services in remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Service which, while formerly operated by the Commonwealth Department of Health, has been operated by the Northern Territory Government since 1 January 1979. The Royal Flying Doctor Service is financed mostly from donations and government contributions. For the year ended 30 June 1983 the Commonwealth Government paid grants totalling $4,198,000 towards operational costs and matching assistance of $785,000 towards an approved program of capital expenditure.

The *Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the Service in the States are met by the State Governments paying 60 per cent, the Society 5 per cent of net operating cost or 10 per cent of donations, whichever is the lesser, and the Commonwealth Government meeting the balance. In the Northern Territory the Society contributes to operating costs as it does in the States, and the Commonwealth met the balance prior to 1 January 1979. After this date the Northern Territory is in the same position as the States. Approved capital expenditure by the Service in the States is shared on a $1 per $1 basis with the States and the Northern Territory Government. Commonwealth Government expenditure for each State and the Northern Territory during 1982-83 was $10,899,092, made up as follows: New South Wales, $3,076,781; Victoria, $3,682,000; Queensland, $1,402,071; South Australia, $1,359,513; Western Australia, $1,077,550; Tasmania, $182,222; and Northern Territory, $118,955.

The *National Heart Foundation of Australia* is a voluntary organisation, supported almost entirely by public donations, established with the objective of reducing the toll of heart disease in Australia. It approaches this objective by programs sponsoring research in cardiovascular disease, community and professional education directed to prevention, treatment and rehabilitation of heart disease and community service programs including rehabilitation of heart patients, risk assessment clinics and surveys and documentation of various aspects of heart disease and treatment of heart disease in Australia. The Foundation's income in 1982 was $5,794,000 of which $4,728,000 was from public donations and bequests. Federal, State and Semi-Government authorities made grants of $65,691 for specific projects conducted by the Foundation. Since the inception of the Foundation research has been a major function and a total of $16,072,000 has been expended in grants to university departments, hospitals and research institutes and for fellowships tenable in Australia and overseas. It is notable however that with increasing opportunities for prevention and control of heart disease, the Foundation's education and community service activities are increasing significantly. In 1982 the expenditure on research was $1,786,773 while expenditure on education and community service was $1,326,000.

The *World Health Organization* (WHO) is a specialised agency of the United Nations having as the objective the attainment by all peoples of the highest level of health. Australia is assigned to the Western Pacific Region, the headquarters of which is at Manila and is represented annually at both the World Health Assembly in Geneva and the Regional Committee Meeting in Manila. Australia's contribution to WHO for 1982-83 was $4,090,410.

The *International Agency for Research on Cancer* (IARC) was established in 1965 within the framework of the World Health Organization. The headquarters of the Agency are located in Lyon, France. The objectives and functions of the Agency are to provide for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer. Australia's contribution to the IARC for 1982-83 was $568,225.

National Health Services and Advisory Organizations

The Australian Health Services Council

A national council, the Australian Health Services Council, together with bilateral Commonwealth/State Health Committees, was established under the Medicare Heads of Government Agreement between the Commonwealth and the States.

The Council and the Committees report to the respective Health Ministers and provide advice on policy and administrative and financial arrangements. The Council and the Committees endeavour to apply principles aimed at achieving operating economies in recognised hospitals and central services consistent with maintaining or achieving an acceptably high standard of health care.

The Health Committees also consider adjustments to Commonwealth and State health programs that may be in the mutual interests of the Commonwealth and the States. They also agree to alterations in payments to the States under the Agreements. These alterations are subsequently considered by the Commonwealth and State Ministers.

Health Services Organizations

The *Commonwealth Department of Health Pathology Laboratory Service* provides clinical diagnostic and investigational facilities at laboratories situated in Albury, Bendigo, Cairns, Hobart, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. Their primary role is to assist medical practitioners in the diagnosis of illness and disease and to provide facilities for investigations into public health and aspects of preventive medicine. During 1982-83, these laboratories carried out approximately 5.8 million pathology tests and investigations in respect of 0.7 million patient requests.

The *Commonwealth Serum Laboratories Commission* (CSL) produces pharmaceutical products for human and veterinary use and is one of Australia's foremost scientific institutes. The Commission's main function is to produce and sell prescribed pharmaceutical products used for therapeutic purposes and to ensure the supply of essential pharmaceutical products in accordance with national health needs. The Commission's functions also include research and development relating to many kinds of human and veterinary diseases covering the fields of bacteriology, biochemistry, immunology and virology. The Commission's laboratories and central administration are located at Parkville, Victoria, with storage and distribution facilities in all States.

For over sixty years, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, human blood fractions, Bacillus Calmette-Guerin (BCG) and an increasing range of veterinary pharmaceutical products needed by Australia's sheep, cattle, pig and poultry industries. The role of CSL has expanded as a result of amendments to the CSL Act from 1 July 1980 that allow CSL to produce, buy, import, supply, sell or export prescribed pharmaceutical products (either of a biological or non-biological nature).

'The *Australian Radiation Laboratory* is concerned with the development of national policy relating to radiation health. The Laboratory

- undertakes research and development in the fields of ionising and non-ionising radiations which have implications for public and occupational health;
- formulates policy by developing codes of practice and by undertaking other regulatory, compliance, surveillance and advisory responsibilities at the national level with respect to public and occupational health aspects of radiation; and
- maintains national standards of radiation exposure and radioactivity.'

The *National Acoustic Laboratories* undertake scientific investigations into hearing and problems associated with noise as it affects individuals, and advise Commonwealth Government Departments and instrumentalities on hearing conservation and the reduction of noise. A free audiological service is provided for pensioners with medical benefit entitlements and their dependants, persons under 21, war widows, Social Security rehabilitees and Veterans' Affairs patients. During 1982-83 the number of appointments provided was 154,702 and the number of hearing aids fitted was 53,126.

The *Ultrasonic Institute* conducts research and provides advisory services on the use of ultrasonic radiation in the diagnosis and treatment of disease. The Institute is recognised as a world leader in its field.

Commonwealth Government health advisory organisations

The *National Health and Medical Research Council* advises the Commonwealth Government and State Governments on matters of public health legislation and administration, on matters concerning the health of the public and on medical research. It also advises the Commonwealth Government and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on the application of funds from the Medical Research Endowment Fund which provides assistance to Commonwealth Government Departments, State Departments, Universities, Institutions and persons for the purposes of medical research and for the training of persons in medical research. The Commonwealth Government makes annual appropriations to the fund. Expenditure for 1982–83 was $29.6 million. The secretariat for the Council and its Committees is provided by the Commonwealth Department of Health and is located in Canberra.

The *Commonwealth Institute of Health* is located in the University of Sydney and provides teaching, research and consultation in all fields relating to health and its maintenance and promotion including resources devoted to the study of health problems of work, the tropics and developing nations. The Institute's academic functions are under the direction of the University, whilst its various training, research and consultative roles are maintained by the Commonwealth Department of Health which funds the Institute's activities.

The Institute has an important role as a resource and data collection centre for the nation and it is endeavouring to promote health and a better understanding of health care and its delivery throughout Australia and neighbouring countries.

The Institute offers postgraduate and undergraduate training in a wide range of Public Health specialities, the largest programme being the Master of Public Health.

Costs for the Institute paid by the Commonwealth Government during 1982–83 were $3,340,064 for administration and $99,753 for plant and equipment.

The *National Biological Standards Laboratory*, including the *Australian Dental Standards Laboratory*, is responsible for the development of standards for therapeutic goods and for testing such products for compliance with standards to ensure that they are safe, pure, potent and efficacious. Other responsibilities, including the inspection of manufacturing premises, the evaluation of new and modified products and the investigation of complaints, make it the linchpin of a uniform national system of control over therapeutic goods.

The British Pharmacopoepia, the British Pharmaceutical Codex and the British Veterinary Codex are specified as primary standards. In addition, the Minister has powers to make orders setting standards for specific types of goods and general classes of goods which are imported, or the subject of interstate trade, or supplied to the Commonwealth Government. Standards developed by the National Biological Standards Laboratory are submitted to a statutory committee, the Therapeutic Goods Standards Committee, which advises the Minister on their suitability.

The Laboratory, jointly with State officials and the pharmaceutical industry, prepares and revises an Australian Code of Good Manufacturing Practice which is the criterion employed by inspectors for the licensing of pharmaceutical manufacturers.

The Laboratory has sections which deal with viral products, bacterial products, pharmaceutical products, antibiotics and pharmacology, testing dental products and some medical devices.

The *Australian Drug Evaluation Committee* makes medical and scientific evaluations both of such goods for therapeutic use as the Minister for Health refers to it for evaluation and of other goods for therapeutic use which, in the opinion of the Committee, should be so evaluated. It advises the Minister for Health as it considers necessary, matters relating to the importation into, and the distribution within, Australia of goods for therapeutic use that have been the subject of evaluation by the Committee. It has the powers to co-opt and seek advice from specialist medical colleges and associations and from the medical and allied professions, drug manufacturers and other sources. During 1982–83 sixty-five applications for approval to market new drugs and thirty-nine applications to extend the indications or amend dosage regimes for currently marketed drugs were considered by the Committee. Sixty-three applications were approved, thirty-three rejected and eight deferred pending production of further information on safety and efficacy. Under the Committee's control are the Australian Registry of Adverse Reactions to Drugs, which provides an early warning system based on reports of reactions to drugs forwarded voluntarily by medical practitioners, pharmacists, hospitals, etc.; the Adverse Drug Reaction Advisory Committee, which gives initial consideration to the adverse drug reaction reports received by the Registry and arranges feedback to the medical profession; the Vaccines Sub-committee; the Endocrinology Sub-committee; the Congenital Abnormalities Sub-committee; the Parenteral Nutrition Sub-committee; the Anti-cancer Drugs Sub-committee; the Radiopharmaceuticals Sub-committee; and the National Drug Information Advisory Sub-committee, formed to oversight administrative aspects of the technical input to the National Drug Information Service.

The *Therapeutic Goods Advisory Committee* considers, and advises the Minister for Health on, any matters relating to standards applicable to goods for therapeutic use and the administration of the Therapeutic Goods Act. The *Therapeutic Goods Standards Committee*, under the same Act, advises the Minister for Health on standards applicable to goods for therapeutic use and requirements relating to the labelling and packaging of any such goods.

The *National Therapeutic Goods Committee* comprises Federal and State representatives. Its function is to make recommendations to the Commonwealth and State Governments on action necessary to bring about co-ordination of legislation and administrative controls on therapeutic goods. Sub-committees have been formed to consider specific matters, notably advertising, establishment of a National Product Register, a Code of Good Manufacturing Practice, and standards for disinfectants.

The *Standing Committee of the Health Ministers' Conference* was established by the 1980 Australian Health Ministers' Conference to carry out any tasks or directions referred to it by the Conference. The Committee's membership consists of representatives from the Commonwealth Departments of Health and Veterans' Affairs, each State health authority, the Northern Territory Department of Health and the Capital Territory Health Commission.

COMMUNICABLE DISEASES

Quarantine

The *Quarantine Act 1908* is administered by the Commonwealth Department of Health and provides for the taking of measures to prevent the introduction or spread of diseases affecting humans, animals and plants.

Human quarantine

The masters of all ships and aircraft arriving in Australia from overseas are required to notify medical officers acting on behalf of the Commonwealth Department of Health of all cases of illness on board their vessel at the time of arrival. Passengers or crew members who are believed to be suffering from a quarantine illness may be examined by Quarantine Medical Officers located at all ports of entry.

The main concern of examining officers is the detection of quarantinable diseases including cholera, yellow fever, plague, typhus fever and viral haemorrhagic fevers. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Sufferers or suspected sufferers may be isolated to prevent the possible spread of the disease.

A valid International Certificate of Vaccination is required of travellers to Australia over one year of age who have been in *yellow fever* endemic zones within the past 6 days.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia so that they may be traced if a case of disease occurs among the passengers on the ship or aircraft by which they travelled to Australia.

Isolation. Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark from their aircraft or ship and who fail to meet Australia's vaccination requirements.

Animal quarantine

The Department of Health, in consultation with Australia's agricultural and livestock groups, seeks to satisfy the need to provide improved genetic material for Australia's livestock industries, while ensuring the maximum practical protection against the entry of exotic livestock diseases.

Importation of animals is restricted to certain species from designated overseas countries whose diseases status and pre-entry quarantine facilities meet Australia's stringent requirement. With few exceptions all imported animals are required to serve a period in quarantine on arrival.

Animal quarantine stations are located at most capital cities. A high security animal quarantine station on the Cocos (Keeling) Islands provides the means whereby the safe importation of a wide range of commercial livestock is facilitated.

Measures to prevent the entry of exotic diseases are also applied through the Northern Surveillance program and the rigorous screening of applications to import biological materials and animal products.

Plant quarantine

Arising from both its dependence upon exotic plant species for agriculture, horticulture and forestry and its island continental isolation, Australia is free of numerous plant pests and diseases that occur elsewhere in the world. Since 1 July 1909, the importation into Australia of plant materials has been subject to an increasingly stringent quarantine: some materials are admitted only under certain conditions while others are prohibited altogether. The quarantines are designed to exclude from the country unwanted pests and plant diseases. It is not possible to predict how a new plant pest or disease will perform when introduced to a new environment free of its natural enemies. Hence the general objective is to keep out of the country any pest or disease which could cause serious economic losses to Australia's agriculture, horticulture or forests.

For further details *see* Year Book No. 61, page 449.

Notifiable diseases

Although State and Territory health authorities are responsible for the prevention and control of infectious diseases within their areas of jurisdiction, certain powers and responsibility may be delegated to local authorities within each State. These usually involve such activities as personal health services, environmental sanitation and local communicable disease control.

The Commonwealth Department of Health receives notification figures from the States and Territories on a monthly basis which are published in *Communicable Diseases Intelligence*. The national totals for the year are published in the annual report of the Director-General of Health.

The following table shows, by State and Territory, the number of cases notified in 1982, for those diseases which are notifiable in all States and Territories. The table does not include diseases which are notifiable only in certain States or Territories. Factors such as the following affect both the completeness of the figures and the comparbility from State to State and from year to year: availability of medical and diagnostic services; varying degrees of attention to notification of diseases; and enforcement and follow up of notifications by health authorities.

NOTIFIABLE DISEASES(*a*), NUMBER OF CASES NOTIFIED 1982

Disease	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Amoebiasis	6	1	14	10	–	–	1	1	33
Ankylostomiasis	1	–	13	3	–	–	93	–	110
Arbovirus infection	22	18	164	17	–	–	–	–	221
Brucellosis	16	2	1	8	–	–	1	–	28
Cholera	1	–	–	–	–	–	–	–	1
Diphtheria	–	–	–	–	–	–	1	1	2
Gonorrhoea	4,652	3,381	1,360	887	1,420	117	839	149	12,805
Hepatitis A (infectious)	215	320	227	136	64	29	34	21	1,046
Hepatitis B (serum)	174	307	81	114	20	–	15	14	725
Hydatid disease	2	2	1	2	–	2	–	3	12
Leprosy	11	3	9	1	14	–	8	–	46
Leptospirosis	57	32	28	7	5	6	–	–	135
Malaria	142	92	219	39	20	1	15	20	548
Ornithosis	4	3	–	5	–	1	–	1	14
Salmonella infections	441	222	419	333	97	42	267	45	1,866
Shigella infections	40	23	87	30	87	3	165	2	437
Syphilis	1,691	262	514	109	222	1	410	2	3,211
Tetanus	–	6	1	5	–	–	–	–	12
Tuberculosis (all forms)	459	414	195	110	136	–	28	21	1,363
Typhoid fever	7	3	2	–	2	–	–	1	15
Typhus (all forms)	1	–	9	–	1	–	–	–	11

(*a*) There were no cases of anthrax, plague, poliomyelitis, smallpox or yellow fever.

NOTIFIABLE DISEASES(*a*), NUMBER OF CASES NOTIFIED: AUSTRALIA, 1976 TO 1982

	1976	*1978*	*1980*	*1981*	*1982*
Amoebiasis	59	19	53	62	33
Ankylostomiasis	463	238	219	136	110
Anthrax	–	–	2	–	–
Arbovirus infection	–	1	18	17	221
Brucellosis	47	50	49	36	28
Cholera	–	1	3	2	1
Diphtheria	3	3	1	18	2
Gonorrhoea	11,479	12,352	11,487	11,197	12,805
Hepatitis A (infectious)	3,067	2,661	1,385	1,453	1,046
Hepatitis B (serum)	442	773	646	500	725
Hydatid disease	10	17	41	24	12
Leprosy	39	55	35	38	46
Leptospirosis	60	37	64	95	135
Malaria	253	273	541	408	548
Ornithosis	2	6	17	13	14
Poliomyelitis	–	1	–	–	–
Salmonella infections	815	2,059	2,292	2,269	1,866
Shigella infections	396	394	545	424	437
Syphilis	3,182	3,322	2,902	2,916	3,211
Tetanus	3	14	9	12	12
Tuberculosis (all forms)	1,436	1,363	1,554	1,460	1,363
Typhoid fever	22	24	19	26	15
Typhus (all forms)	1	1	–	–	11

(*a*) No cases of smallpox were notified. Plague and yellow fever were not notifiable for 1976 and 1978—no cases have since been notified.
Source: Commonwealth Department of Health.

Immunisation campaigns

Continuing immunisation programs against poliomyelitis, measles, rubella, diphtheria, tetanus, and whooping cough are maintained in all States and Territories. Mumps immunisation programs commenced late in 1982.

Mass campaigns for rubella immunisation are routinely undertaken only on girls aged between 10 and 14 years. Rubella immunisation is also available when appropriate to females during their reproductive years. Whooping cough immunisation is currently given only to infants less than 1 year of age.

HOSPITALS

Repatriation hospitals

A full range of services for the medical care and treatment of eligible veterans and certain dependants is available from the Department of Veterans' Affairs hospital system. Patients from the general community may also receive treatment at Repatriation hospitals provided bed capacity is available above the needs of the entitled veteran and the hospital facilities are appropriate to the treatment required.

In-patient treatment is provided at the six acute-care Repatriation General Hospitals (one in each State) and three auxiliary hospitals. In-patient treatment may also be provided in non-departmental public and private hospitals at the Department's expense in certain circumstances.

Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 9, Social Security and Welfare.

Hansenide hospitals

The two isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's Disease (leprosy) are at Little Bay in New South Wales and Derby in Western Australia. In North Queensland, a leprosy annexe is attached to the Palm Island Hospital near Ingham and in the Northern Territory leprosy sufferers are treated and cared for at the East Arm Hospital in Darwin. Treatment is also provided at a number of other hospitals in Australia which do not have facilities set aside specifically for leprosy patients.

Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like. Statistics relating to mental health institutions are available from relevant agencies in most States.

Hospital statistics

A major factor in the cost of health care in Australia is hospital treatment of patients. Attempts to measure the number of in-patients treated and bed-days involved for each disease or injury have been going on for some years, but as coverage is incomplete it is not possible to present national statistics. Figures for New South Wales, Queensland, South Australia, Western Australia and Tasmania, however, have been published in the ABS publications *Hospital and Nursing Home Inpatients* (4306.1), *Patients Treated in Hospitals* (4303.3), *Hospital Morbidity* (4302.4), *Hospital In-patient Statistics* (4301.5) and *Hospital Morbidity* (4301.6) respectively.

The number of hospitals and beds in each State and Territory, as approved under the Health Insurance Act, is provided in the table below.

APPROVED HOSPITALS (*a*) AND BEDS, STATES AND TERRITORIES, 30 JUNE 1983

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Approved hospitals—									
Public	247	170	143	83	95	23	6	4	771
Private	107	119	46	37	23	8	—	1	341
Total	**354**	**289**	**189**	**120**	**118**	**31**	**6**	**5**	**1,112**
Beds in—									
Public hospitals	28,101	15,456	13,115	6,513	6,859	2,351	790	1,044	74,229
Private hospitals	6,262	5,629	3,646	2,143	1,882	519	—	51	20,132
Total	**34,363**	**21,085**	**16,761**	**8,656**	**8,741**	**2,870**	**790**	**1,095**	**94,361**
Beds per 1,000 population	*6.4*	*5.2*	*6.8*	*6.5*	*6.5*	*6.6*	*5.9*	*4.7*	*6.2*

(*a*) Includes Veterans' Affairs hospitals.
Source: Commonwealth Department of Health.

An examination of the New South Wales figures for 1981, which include psychiatric hospitals, indicates that the largest numbers of patients were treated for conditions of pregnancy, childbirth and the puerperium (10.6 per cent), genito-urinary diseases (9.5 per cent) and injury (9.4 per cent) but, in terms of hospital bed-days, the greatest occupancy rate was caused by mental disorders (27.2 per cent) followed by diseases of the circulatory system (15.6 per cent) and injury (6.8 per cent). Of the principal operations performed the largest number was for female genital organ surgery (13.2 per cent) followed by digestive system surgery (9.6 per cent) and obstetric surgery (8.5 per cent).

People in Health Occupations

Information concerning the number of people employed in selected health occupations and/or industries in Australia as derived from responses to the occupation and industry questions in the Census of Population and Housing 30 June 1981 was published in *Persons in Health Occupations and Industries* (4345.0). This information is summarized in the table below.

PERSONS IN HEALTH OCCUPATIONS AND INDUSTRIES: AUSTRALIA, CENSUS OF POPULATION AND HOUSING 30 JUNE 1981.

	Industry of employment(a)						
						Total	
Occupation(a)	*Hospitals and nursing homes*	*Medicine*	*All other health industries(b)*	*Total health industries*	*All other industries*	*Number*	*Rate(c)*
Medical practitioners	8,531	15,913	1,010	25,454	1,673	27,127	18.6
Dentists	233	70	5,027	5,330	256	5,586	3.8
Nurses							
Certificated	83,959	4,748	8,823	97,530	9,035	106,565	73.1
Other(*d*)	27,467	316	3,302	31,085	1,783	32,868	22.5
Nursing aides(*d*)	19,016	136	475	19,627	1,501	21,128	14.5
Total	130,442	5,200	12,600	148,242	12,319	160,561	110.2
Pharmacists (incl. assistants)	1,253	21	63	1,337	8,852	10,189	7.0
Optometrists	26	7	1,056	1,089	189	1,278	0.9
Physiotherapists	2,261	148	1,601	4,010	468	4,478	3.1
Radiographers	1,979	694	155	2,828	189	3,017	2.1
Chiropodists	112	50	547	709	201	910	0.6
Chiropractors	11	31	849	891	65	956	0.7
Dieticians	454	10	55	519	166	685	0.5
Occupational therapists	1,682	19	342	2,043	484	2,527	1.7
Speech therapists	369	8	212	589	486	1,075	0.7
Other professional medical workers	171	109	803	1,083	555	1,638	1.1
Medical science technologists	1,925	660	169	2,758	1,040	3,798	2.6
Medical science technicians	4,962	1,743	5,247	11,952	3,493	15,445	10.6
Ambulance officers	35	2	4,267	4,304	247	4,551	3.1
Attendants – hospital, other medical	20,235	228	4,015	24,478	3,188	27,666	19.0
Health inspectors	15	—	124	139	2,097	2,236	1.5
Total health occupations	174,697	24,913	38,145	237,755	35,968	273,723	187.8
Total all other occupations	100,838	24,181	17,430	142,449	5,876,460	6,018,909	. .
Grand total	**275,535**	**49,094**	**55,575**	**380,200**	**5,912,432**	**6,292,632**	. .

(a) Occupation and industry of main job held during the week prior to the census as reported and described by respondents. (b) Includes dentistry, dental laboratories, optometry, optical dispensers, community health centres, ambulance services, and other and undefined health services. (c) Rate per 10,000 of total population as derived from census count. (d) Includes trainees.

Discrepancies between the sum of components and the totals shown are due to random adjustment. Information about the random adjustment process is contained in the ABS publication *Census 81—Effects of Introduced Random Error* (2156.0).

DEATHS

Information relating to crude death rates and life expectancy is contained in Chapter 6, Demography (Vital Statistics)

Causes of Death and Perinatal Deaths

Causes of death in Australia are classified according to the Ninth Revision of the International Classification of Diseases (ICD) produced by the World Health Organization (WHO). A summary of age-specific death rates for major cause groups in this period was published in *Causes of Death: Age-specific Death Rates, Australia, 1968 to 1978* (3308.0). Detailed statistics are published in the publication *Causes of Death, Australia* (3303.0), and only broad groupings of causes of death are shown in the table below. The statistics in the table relate to 1982 and represent the number of deaths registered that year rather than the number of deaths which actually occurred in 1982.

The major causes of death in the community in 1982 were diseases of the circulatory system (accounting for 50.3 per cent), neoplasms (21.9 per cent), diseases of the respiratory system (7.8 per cent) and accidents, poisonings and violence (7.2 per cent). Infectious diseases have caused few deaths in Australia in recent years, largely as a result of quarantine activities, immunisation campaigns and similar measures. In 1982, only 0.5 per cent of all deaths were due to such diseases.

The relative importance of groups of causes of death varies with age. Diseases of the circulatory system and neoplasms are predominant in middle and old age. Accidents, particularly those involving motor vehicles, are the primary cause of death in childhood and early adulthood. The majority of infant deaths (65 per cent in 1982) occur within 28 days after birth (see table on perinatal deaths). Nearly all of these neonatal deaths are due to congenital anomalies, birth injury or other conditions present from birth.

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1982

Causes of death	*Age group (years)*									*Total*
	Under one	*1–14*	*15–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75 and over*	*(a)*
					NUMBER OF DEATHS					
Infectious and parasitic diseases	40	36	15	23	13	34	59	112	205	537
Neoplasms	17	171	178	313	867	2,484	5,570	7,844	7,709	25,153
Endocrine, nutritional and metabolic diseases and immunity disorders	22	36	28	28	45	108	285	562	1,009	2,123
Diseases of the nervous system and sense organs	57	90	72	66	67	99	215	328	499	1,494
Diseases of the circulatory system	12	29	73	238	744	2,677	7,301	14,882	31,725	57,686
Diseases of the respiratory system	56	66	57	68	104	306	1,046	2,443	4,763	8,910
Diseases of the digestive system	12	10	19	65	193	428	743	859	1,580	3,909
Congenital anomalies	751	113	41	22	18	31	35	28	13	1,052
All other diseases(*b*)	1,000	25	63	107	74	174	406	770	2,235	4,854
Signs, symptoms and ill-defined conditions	452	27	17	21	11	26	29	29	145	759
Accidents, poisonings and violence	63	651	1,917	1,411	881	808	782	696	1,080	8,294
All causes	**2,482**	**1,254**	**2,480**	**2,362**	**3,017**	**7,175**	**16,471**	**28,553**	**50,963**	**114,771**
					RATE(*c*)					
Infectious and parasitic diseases	17	1	1	1	1	2	4	12	38	4
Neoplasms	7	5	7	13	45	164	404	817	1,438	166
Endocrine, nutritional and metabolic diseases and immunity disorders	9	1	1	1	2	7	21	59	188	14
Diseases of the nervous system and sense organs	24	3	3	3	3	7	16	34	93	10
Diseases of the circulatory system	5	1	3	10	38	177	529	1,549	5,919	380
Diseases of the respiratory system	23	2	2	3	5	20	76	254	889	59
Diseases of the digestive system	5	–	1	3	10	28	54	89	295	26
Congenital anomalies	313	3	2	1	1	2	3	3	2	7
All other diseases(*b*)	417	1	2	4	4	12	29	80	417	32
Signs, symptoms and ill-defined conditions	188	1	1	1	1	2	2	3	27	5
Accidents, poisonings and violence	26	19	73	57	45	53	57	72	202	55
All causes	**1,035**	**36**	**95**	**95**	**156**	**474**	**1,194**	**2,973**	**9,509**	**756**
					PERCENTAGE(*d*)					
Infectious and parasitic diseases	1.6	2.9	0.6	1.0	0.4	0.5	0.4	0.2	0.4	0.5
Neoplasms	0.7	13.6	7.2	13.3	28.7	34.6	33.8	27.5	15.1	21.9
Endocrine, nutritional and metabolic diseases and immunity disorders	0.9	2.9	1.1	1.2	1.5	1.5	1.7	2.0	2.0	1.8
Diseases of the nervous system and sense organs	2.3	7.2	2.9	2.8	2.2	1.4	1.3	1.1	1.0	1.3
Diseases of the circulatory system	0.5	2.3	2.9	10.1	24.7	37.3	44.3	52.1	62.3	50.3
Diseases of the respiratory system	2.3	5.3	2.3	2.9	3.4	4.3	6.4	8.6	9.3	7.8
Diseases of the digestive system	0.5	0.8	0.8	2.8	6.4	6.0	4.5	3.0	3.1	3.4
Congenital anomalies	30.3	9.0	1.7	0.9	0.6	0.4	0.2	0.1	–	0.9
All other diseases(*b*)	40.3	2.0	2.5	4.5	2.5	2.4	2.5	2.7	4.4	4.2
Signs, symptoms and ill-defined conditions	18.2	2.2	0.7	0.9	0.4	0.4	0.2	0.1	0.3	0.7
Accidents, poisonings and violence	2.5	51.9	77.3	59.7	29.2	11.3	4.7	2.4	2.1	7.2
All causes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(*a*) *Total* includes 14 deaths where age is not known. (*b*) Includes 1,006 deaths from conditions originating in the perinatal period and 1,717 deaths from diseases of the genito-urinary system. (*c*) Rates are per 100,000 of population at risk, except for children under one year of age which are per 100,000 live births registered. (*d*) Percentage of all deaths within each age group.

Suicides

A range of statistics relating to deaths by suicide (as determined by coroner's inquests) in Australia was published by the ABS during 1983 in *Suicides, Australia 1961–1981 (Including historical series 1881–1981)* (3309.0).

In brief, the statistics indicate that

- Suicide accounted for over 1,500 deaths in Australia in each of the years 1971 to 1981. While this represents a small proportion of all deaths (only 1.5 percent of the total in 1981), it has considerable significance as a cause of death at ages between 15 and 44 years. For example, in 1981, suicide accounted for 15.2 per cent of all deaths at ages 25–34 years.
- While the suicide rate per 100,000 population in 1981 (11.2) is little different from 100 years earlier (11.0), there have been considerable fluctuations during the intervening years. Particularly significant for males is the high rate in 1930 (24.0), and the low rates during World War II. The period 1963 to 1967 showed the highest rates for females, as well as higher than average rates for males.
- In most years of the period 1881 to 1981, male suicide rates have been more than double those of females (16.9 and 5.5 respectively in 1981).
- Firearms and explosives were the methods of suicide most frequently used by males over the period 1968 to 1981. Poisoning by solid or liquid substances was the most frequent for females over this period.

There were 1,777 suicides in 1982, which represented 1.5 percent of all deaths registered in that year, and a rate of 12 per 100,000 population.

Perinatal deaths

Since deaths within the first four weeks of life (neonatal deaths) are mainly due to conditions originating before or during birth, and the same conditions can cause fetal death (stillbirth), special tabulations are prepared combining the two. These are termed 'perinatal deaths'. The statistical definition of perinatal deaths in Australia was amended in 1979 from that previously used, in accordance with a recommendation of the Ninth Revision Conference (1975) of the World Health Organization "that national perinatal statistics should include all fetuses and infants delivered

PERINATAL DEATHS BY CAUSE, AUSTRALIA, 1982

	Number of deaths			*Rate*		
Cause of death	*Fetal*	*Neonatal*	*Perinatal*	*Fetal(a)*	*Neonatal (b)*	*Perinatal (a)*
Conditions in fetus/infant—						
Slow fetal growth, fetal malnutrition and immaturity	122	171	293	0.51	0.71	1.21
Birth trauma	6	40	46	0.02	0.17	0.19
Hypoxia, birth asphyxia and other respiratory conditions	798	424	1,222	3.30	1.77	5.06
Fetal and neonatal haemorrhage	39	134	173	0.16	0.56	0.72
Haemolytic disease of fetus and newborn	22	8	30	0.09	0.03	0.12
Other conditions originating in the perinatal period	497	108	605	2.06	0.45	2.50
Congenital anomalies	208	565	773	0.86	2.36	3.20
Infectious and parasitic diseases	4	4	8	0.02	0.02	0.03
All other causes	9	75	84	0.04	0.31	0.35
Conditions in mother—						
Maternal conditions which may be unrelated to present pregnancy	185	108	293	0.77	0.45	1.21
Maternal complications of pregnancy	197	455	652	0.82	1.90	2.70
Complications of placenta, cord and membranes	752	177	929	3.11	0.74	3.85
Other complications of labour and delivery	39	127	166	0.16	0.53	0.69
No maternal condition reported	532	662	1,194	2.20	2.76	4.94
All causes—1982	**1,705**	**1,529**	**3,234**	**7.06**	**6.38**	**13.39**
1981	1,706	1,440	3,146	7.18	6.11	13.25
1980	1,708	1,503	3,211	7.52	6.67	14.14
1979	1,757	1,605	3,362	7.82	7.20	14.96
1978	1,904	1,737	3,641	8.43	7.75	16.11
1977	1,896	1,869	3,765	8.31	8.26	16.51

(*a*) Per 1,000 births registered (live births and stillbirths) weighing 500 grams or more at birth. (*b*) Per 1,000 live births registered weighing 500 grams or more at birth

Note: The statistics for the years 1977 and 1978 in this table are also based on the revised definition.

weighing at least 500 grams (or, when birthweight is unavailable, the corresponding gestational age (22 weeks) or body length (25 cm crown-heel)), whether alive or dead". The above table incorporates a further recommendation of the Conference in that it shows for 1982 the number of fetal, neonatal and total perinatal deaths in Australia classified by both the main condition in the fetus/infant and the main condition in the mother.

The perinatal death rate for Australia rose slightly in 1982, to 13.39 per 1,000 total births compared with 13.25 in 1981. This was the first time the rate (on the new definition) had not shown a decrease over the last 10 years.

Of the conditions in the child, the two main groups responsible for perinatal deaths were *Hypoxia, birth asphyxia and other respiratory conditions* (37.8 per cent of the total) and *Congenital anomalies* (23.9 per cent). Thirty-seven per cent of all perinatal deaths did not mention any condition in the mother as contributing to the death. Of those deaths where maternal conditions were reported, 45.5 per cent were reported as being due to *Complications of placenta, cord and membranes*.

Cremations

	1980		*1981*		*1982*		
State/Territory	*Number of cremations (b)*	*Number of deaths*	*Number of cremations (b)*	*Number of deaths*	*Number of crematoria (a)*	*Number of cremations (b)*	*Number of deaths*
N.S.W.	20,797	40,282	21,182	39,959	17	21,819	42,352
Vic.	11,804	29,374	11,597	29,034	4	12,234	30,611
Qld	7,821	16,497	8,047	17,175	9	8,547	18,149
S.A.	4,136	9,580	4,335	9,706	2	4,723	10,457
W.A.	4,270	8,166	4,306	7,993	3	4,415	8,187
Tas.	1,401	3,392	1,352	3,320	2	1,476	3,432
N.T.	—	512	—	854	—	—	573
A.C.T.	514	892	643	962	1	595	1,010
Australia—							
number	**50,743**	**108,695**	**51,462**	**109,003**	**38**	**53,809**	**114,771**
per cent (c)	..	46.7	..	47.2	..	46.9	..

(a) At 31 December. (b) Cremations are not necessarily carried out in the State or Territory where the death was registered. (c) Cremations as a percentage of all deaths.
Source: Services and Investment Ltd. (Cremation Society of Australia (ACT) Ltd)

Health-Related Surveys Conducted by the ABS

Australian Health Surveys

A survey was conducted by ABS during the period July 1977–June 1978 to obtain information on the health of Australians and the use of and need for various health services and facilities. Topics covered by the survey included recent and chronic illness, accidents, use of medicines, and use of doctors, dentists, and other health workers and facilities, as well as a range of personal characteristics. The items are described more fully in *Australian Health Survey Information Paper* (4340.0). Summary results of the survey have been published in *Australian Health Survey 1977–1978* (4311.0); detailed results are published in a series of publications (4313.0 to 4322.0) dealing with the special topics of the survey. The survey is explained in detail in *Outline of Concepts, Methodology and Procedures Used* (4323.0).

During the period February 1983–January 1984 a survey was conducted to obtain information on the actions people had taken about their health in the two weeks before interview and the medical conditions which underline those actions. The actions covered included hospitalisations; consultation with doctors, dentists and other health professionals; reduced activity and medicine taking. For some topics such as hospitalisations and dental consultations, details of the action related to the 12 months before interview. The survey methodology allowed for the identification of conditions for which multiple actions had occurred. Further explanation is given in *Australian Health Survey, 1983, Outline of Concepts, Methodology and Procedures Used* (4323.0).

Health Insurance Surveys

These surveys have been conducted in March for the years 1979–1983.

In March 1983 the ABS conducted a survey throughout Australia to obtain information about levels of health insurance cover in the Australian community. The survey obtained, in respect of contributor units, details of the hospital and medical insurance arrangements they had at the time of the survey. The survey found that as at March 1983, 63.9 per cent of all possible contributor units had some type of private health insurance. A further 21.3 per cent were identified as being covered by special Commonwealth health benefits, leaving 14.8 per cent of all possible contributor units without health insurance nor identified access to special Commonwealth health benefits.

Compared with an estimate of 65.8 per cent obtained in a similar survey in March 1982, the above estimate represents a net decrease of 1.9 percentage points in the previous twelve months in the proportion of possible contributor units with some type of health insurance cover. An estimated 1,826,300 persons were without health insurance or identified access to special Commonwealth health benefits, at March 1983.

Results of the survey showing such details as type and level of health insurance cover; income and composition of contributor unit; age of head of contributor unit; special Commonwealth health benefits, and an outline of the medical and hospital benefits schemes 1 November 1978 to 30 June 1983 are published in *Health Insurance Survey, Australia, March 1983* (4335.0).

In May 1984 a survey was conducted seeking information on hospital and ancillary insurance taken out over and above that which is available under Medicare. This survey covered wage and salary earners in capital cities only.

Hearing Survey

In September 1978 the ABS conducted a survey to obtain information about hearing problems for persons aged 15 years or more. Details included the cause and extent of their problem, whether a hearing aid was used, and if not, the reason for not using an aid. It also contained data on whether persons have had their hearing tested in the last 5 years.

Results of the survey have been published in the publication *Hearing and the Use of Hearing Aids (Persons aged 15 years or more) September 1978* (4336.0).

A similar survey was conducted for persons aged 2 to 14 years but contained data only on cause of hearing problem and whether persons have had their hearing tested in the last 5 years. Results of this survey are contained in the publication *Sight, Hearing and Dental Health (Persons aged 2 to 14 years) February–May 1979* (4337.0).

Sight Survey

During February to May 1979 the ABS conducted a survey to obtain information on sight problems and the use of glasses/contact lenses for the Australian population aged 2 years or more. Details included type of sight problems, reason glasses/contact lenses are worn, how often they are worn and whether persons have had their sight tested in the last 5 years.

Results of the survey for persons aged 2 to 14 years have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February–May 1979* (4337.0). For persons aged 15 years or more the relevant publication is *Sight Problems and the Use of Glasses/Contact Lenses (persons aged 15 years or more) February–May 1979* (4338.0).

Dental Surveys

During February to May 1979 the ABS conducted a survey to obtain information on the dental health of the Australian population aged 2 years or more. Information collected included time since last visit to a dentist; number of visits in last 12 months, treatment received at last visit and usual number of check-ups per year. Data were also collected for persons aged 15 years or more as to whether false teeth were worn.

Results of the survey for persons aged 2 to 14 years have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February–May 1979* (4337.0). For persons aged 15 years or more the relevant publication is *Dental Health (persons aged 15 years or more) February–May 1979* (4339.0).

A survey was conducted during November 1983 to obtain information on the usage of dental services at schools and at private practices. Results are published in *Children's Dental Health Survey, Australia* (4349.0).

Immunisation Surveys

Data was collected during the Australian Health Survey 1977-78 on the immunisation status of persons aged 2 to 5 years in relation to Poliomyelitis, Diptheria, Whooping Cough and Tetanus and results were published in *Australian Health Survey, Sabin and Triple Antigen Vaccination, 1977-78* (4316.0).

In November 1983, a survey was held to obtain infomation on the immunisation status of persons aged 0-6 years against Poliomyelitis, Diptheria, Whooping Cough and Tetanus. Results are available in *Childrens Immunisation Survey, Australia* (4351.0).

Information about the immunisation status of females aged 15 to 34 years in relation to Rubella was obtained during a survey conducted throughout Australia in March 1983. The survey results indicated that of the Australian female population aged 15 to 34 years, 69.5 per cent had obtained immunisation against Rubella; 23.6 per cent had not received any immunisation and 6.9 per cent did not know whether or not they had been immunised against Rubella. The most frequently reported reason for not obtaining immunisation was that they had 'had Rubella'. This was reported by 32.1 per cent of females aged 15-34 years who had not received the vaccination. Another 28.4 per cent were reported as having never 'bothered or thought about it'.

Results of the survey are published in *Rubella Immunisation Survey (females aged 15 to 34 years) March 1983* (4353.0).

Survey of Handicapped Persons

During February to May 1981 a survey was conducted thoughout Australia to obtain infomation about the nature and extent of various disabilities and handicaps in the Australian community.

The survey examined the needs of and the kinds of problems experienced by persons with different types of handicaps. The areas examined in respect of handicapped persons included causes, disabling conditions, services, aids, accommodation, employment, education, income, transport, recreation and institutionalised care.

The sample for the survey consisted of two distinct parts. In the first part, a sample of 33,000 households was selected from all households in Australia and in the second part, a sample of 5,300 patients or residents was selected from 723 randomly selected health establishments throughout Australia.

For the purposes of the survey, a disabled person was defined as a person who had one or more of a set of selected disabilities or impairments (e.g. loss of sight, loss of hearing, slowness at learning or understanding, incomplete use of arms and fingers, restriction in physical activities). These had to have lasted or be likely to last for 6 months or more.

A handicapped person was defined as a disabled person who was further identified as being limited to some degree in his/her ability to perform certain activities or tasks in relation to one or more of the following five areas: self care, mobility, communication, schooling, employment. Since the measurement of handicap could not be readily applied to children under 5 years of age, all disabled persons in this age group were regarded as being handicapped.

The main features of the survey results are:

- 1,264,600 Australians or 8.6 per cent of the population are handicapped. A further 4.6 per cent of the population are disabled but suffer no subsequent handicap.
- Of the 1,264,600 handicapped persons, 295,800 were mildly handicapped, 253,700 were moderately handicapped and 513,900 were severely handicapped. (Severity of handicap was not determined for 201,200 persons with only a schooling or employment limitation, or aged less than 5 years).
- Of those who are handicapped, 111,000 are residents of health establishments and 1,153,600 are resident in households.
- The handicaps of persons in health establishments tended to be more severe than those of persons in households. For example, over 90 per cent of handicapped persons in health establishments were severely handicapped compared with 36 per cent of handicapped persons in households.
- As age increases the likelihood of being handicapped also generally increases. For example, in the age range 15 to 24 years, there were 66,200 handicapped persons (2.6% of persons aged 15 to 24) whilst in the age range 65 to 74 years there were over 220,000 (24.1% of persons aged 65 to 74).

CHAPTER 11

LAW AND ORDER

THE LAW IN AUSTRALIA

Nature and composition of law

The laws of a country represent the common body of rules, whether proceeding from legislation, executive action, court judgments or custom, that a state or community recognises as binding on its citizens or members, and which are enforceable by judicial means. In Australia, the law consists basically of:

- Acts passed by the Federal Parliament acting within the scope of its powers under the Australian Constitution, together with regulations, rules and orders made under such Acts;
- Acts and Ordinances passed in respect of the Australian Capital Territory and the Northern Territory of Australia, together with regulations, rules and orders made under such Acts and Ordinances;
- Acts passed by State Parliaments and the Legislative Assembly of the Northern Territory, together with regulations, rules and orders made under such Acts;
- so much of the common or statute law of England that still applies to Australia and remains unrepealed; and
- the common law, consisting of judicial decisions.

These various laws relate to a number of subject-matters, including constitutional law, criminal law, civil law, family law and industrial law.

Federal and State responsibilities

Under the Australian Constitution, the Commonwealth of Australia is empowered to make laws in relation to certain matters specified in the Constitution, e.g. in relation to trade and commerce, taxation, defence and external affairs. In relation to some of these matters, the powers of the Commonwealth are concurrent with those of the Australian States and Territories in that they may be exercised by either the Commonwealth, the States or the Territories. In relation to some other specified topics the Commonwealth's power is absolute, and in all areas of Federal jurisdiction, Commonwealth laws are binding on the Australian States and Territories.

The Australian States and Territories have independent jurisdiction in all matters not otherwise specifically invested in the Commonwealth of Australia and it is the statute law and the common law of the States and Territories that primarily govern the day-to-day lives of most Australians. With certain exceptions, such as traffic laws, State and Territorial law applies normally only to persons who are residents of the State or Territory concerned and to things located or events occurring within such State or Territory.

The common law is uniform throughout Australia although statute law often varies between the States and Territories. However, some of the problems arising from these differences have become recognised over recent years and attempts are now being made, wherever possible, towards the enactment of uniform laws in areas of State and Territory jurisdiction.

Administration of the law

Administration of the law in Australia is undertaken by the responsible governments concerned, principally through Federal, State and Territorial Police Forces, and State and Territorial corrective or penal services. There is no independent Federal corrective service, and the relevant State or Territorial agencies provide corrective services for Federal offenders.

The various law enforcement agencies involved in the administration of law operate in such a way that the activities of one agency may affect the activities of another, e.g. a criminal offence reported to the police may lead to the arrest, charge and court appearance of the offender, and subsequent provision of corrective (e.g. imprisonment, probation) or welfare services. The agencies involved, and the relationship between them, may vary according to the laws, agencies and types of matters or offenders involved.

Reform of the law

Reform of the law is undertaken principally through State and Commonwealth Parliaments and Attorneys-General acting on recommendations provided by State and the Australian Law Reform Commissions, and by State Supreme and Federal Courts.

Law Reform Commissions have been established as statutory authorities in all States (except South Australia) to undertake review of State laws, and report findings and recommendations for reform of those laws, to State Parliaments and Attorneys-General. (In South Australia, a Law Reform Committee was established by proclamation to perform similar functions in that State.) In addition, in Victoria there is a Chief Justice's Law Reform Committee and a Victorian Legal and Constitutional Committee established under the *Parliamentary Committees (Joint Investigatory Committees) Act 1982*. These agencies have functions to recommend reform of the law. Acceptance of recommendations depends upon governmental and parliamentary reaction to the proposals.

The Australian Law Reform Commission

The Australian Law Reform Commission (ALRC), which commenced operations in 1975 under the *Law Reform Commission Act 1973*, was established to report on the review, simplification and modernisation of those laws concerning matters consigned by the Australian Constitution to the jurisdiction of the Commonwealth Parliament, and to consider proposals for the uniformity of laws of the States and Territories. The Commission is required to make reports to the Attorney-General arising out of such review or consideration, and to make such recommendations as it thinks fit.

The ALRC has assumed the functions formerly undertaken by the A.C.T. Law Reform Commission, and has the responsibility for review of Territorial law operating in the Australian Capital Territory.

In undertaking its functions, the Commission follows the normal procedure of law commissions where possible. Upon receipt of a reference, the Commission advertises and calls for public submissions in relation to the reference, and prepares a working paper examining the issues for distribution among groups thought to have a special interest in the subject matter. Public sittings are conducted, and in the light of submissions received, a final report containing draft legislation is prepared for submission to the Attorney-General. The Commission, which consisted of five full-time, and seven part-time members at 30 June 1983, makes extensive use of honorary consultants.

To 30 June 1983, the Commission has completed reports on the following references: complaints against police and criminal investigation; alcohol, drugs and driving; consumers in debt; defamation; sentencing of federal offenders; human tissue transplants; lands acquisition and compensation; insurance intermediaries; child welfare; insurance contracts and privacy. Legislation following the recommendations contained in these reports have been enacted in some cases. In other cases, the proposals made by the Commission are under consideration by Parliament or the appropriate Commonwealth Department. Current references include debt recovery laws, access to court (standing to sue and class actions), Aboriginal customary laws, evidence, service and execution of process, Admiralty jurisdiction, foreign state immunity, and community law reform. Other references are expected shortly.

COURTS: STRUCTURE AND FUNCTIONS

Federal Courts

The judicial power of the Commonwealth of Australia is vested in the High Court of Australia, in the Federal courts created by the Federal Parliament and in the State courts invested by Parliament with Federal jurisdiction. The nature and extent of the judicial power of the Commonwealth is prescribed by Chapter III of the Australian Constitution. For details of the Commonwealth of Australia Constitution Act *see* Year Book No. 67.

High Court of Australia

The Australian Constitution vests the judicial power of the Commonwealth in the High Court, in such other Federal courts as the Parliament creates, and in such other courts as it invests with Federal jurisdiction. The High Court consists of a Chief Justice and six other Justices. Sittings of the Court are now held mainly at its seat in Canberra. The High Court has both original and appellate jurisdiction.

The Constitution gives original jurisdiction to the High Court in all matters:

(i) arising under a treaty;
(ii) affecting consuls or other representatives of other countries;
(iii) in which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party;

(iv) between States, or between residents of different States, or between a State and a resident of another State; and

(v) in which a writ of mandamus or prohibition, or an injunction, is sought against an officer of the Commonwealth.

The Constitution allows the Parliament to give the High Court additional original jurisdiction within limits. The Parliament has given the Court such jurisdiction in all matters arising under the Constitution or involving its interpretation and in trials of indictable offences against the laws of the Commonwealth (*Judiciary Act* 1903, s. 30). The Court is also a Court of Disputed Returns (*Commonwealth Electoral Act* 1918, s. 184, *Australian Capital Territory Representation (House of Representatives) Act* 1973, s. 21, *Northern Territory Representation Act*, s. 8A, and *Referendums (Constitution Alteration) Act* 1906, s. 29).

State Courts are excluded from exercising jurisdiction in relation to some matters over which the High Court has jurisdiction. These matters are:

(i) matters arising directly under any treaty;

(ii) suits between States, or between persons suing or being sued on behalf of different States, or between a State and a person suing or being sued on behalf of another State;

(iii) suits by the Commonwealth, or any person suing on behalf of the Commonwealth, against a State, or any person being sued on behalf of a State;

(iv) suits by a State, or any person suing on behalf of a State, against the Commonwealth or any person being sued on behalf of the Commonwealth; and

(v) matters in which a writ of mandamus or prohibition is sought against an officer of the Commonwealth or a Federal court.

Any matter before a State or Territory or Federal court which arises under the Constitution or involves its interpretation may be removed into the High Court (*Judiciary Act* 1903, s. 40).

The Constitution also gives the High Court appellate jurisdiction. Subject to such exceptions and regulations as are prescribed by the Parliament, the High Court can hear appeals from any decision of:

(i) any Justice or Justices exercising the original jurisdiction of the High Court;

(ii) any other Federal court, or court exercising Federal jurisdiction; and

(iii) the Supreme Court of any State, or of any other State Court from which an appeal lay to the Privy Council at the time the Commonwealth was established.

As a general rule the High Court has to give special leave before an appeal can be brought to it from the Supreme Court of a State, any other Court of a State exercising Federal jurisdiction or the Federal Court of Australia. An appeal can, however, be brought *as of right* from the Full Court of a State Supreme Court if it involves the interpretation of the Constitution. Also, an appeal can be brought *as of right* from the Full Court of a State Supreme Court or of the Federal Court in the case of a judgment involving an award or claim of an amount or value of $20,000 or more *except* an appeal on the quantum of damages in the event of death or personal injury. In the case of such an appeal special leave must be obtained.

Appeals to the Privy Council

The jurisdiction which the Privy Council formerly had to hear appeals from decisions of the High Court has, for all practical purposes, disappeared (see *Privy Council (Limitation of Appeals) Act* 1968 and *Privy Council (Appeals from the High Court) Act* 1975).

Federal Court of Australia

The Federal Court of Australia was created by the *Federal Court of Australia Act* 1976 and began to exercise its jurisdiction on 1 February 1977.

The Court consists of the Industrial Division and the General Division. Matters under the *Conciliation and Arbitration Act* 1904 are dealt with in the Industrial Division. All other matters are dealt with in the General Division. The Court sits as required in each State and in the Australian Capital Territory and the Northern Territory.

The Court has such original jurisdiction as is invested in it by laws made by the Parliament. Except in cases where a hearing had actually started before 1 February 1977, the jurisdiction formerly exercised by the Federal Court of Bankruptcy and the Australian Industrial Court has been transferred to it. Important jurisdiction in the Court includes matters under the *Administrative Decisions (Judicial Review) Act* 1977 and certain matters under the *Trade Practices Act* 1974.

The Federal Court of Australia has appellate jurisdiction over decisions of single judges of the Court, decisions of the Supreme Courts of the Territories and certain decisions of State Supreme Courts exercising Federal jurisdiction (for example, under the *Income Tax Assessment Act* 1936 and the *Patents Act* 1952).

Australian Industrial Court and the Federal Court of Bankruptcy

Matters in which a hearing had begun in the Australian Industrial Court or the Federal Court of Bankruptcy before 1 February 1977 continue to be heard in these Courts. Otherwise, the jurisdiction formerly exercised by these Courts is now vested in the Federal Court of Australia.

Family Law

The *Family Law Act* 1975 commenced operation on 5 January 1976. It introduced a new law dealing with the dissolution and nullity of marriage, custody and welfare of the children, maintenance and the settlement of property between the parties to a marriage. The Act also created the Family Court of Australia as a specialist court dealing only with matrimonial and associated proceedings.

The main change made by the Act is that fault is no longer taken into account as a ground for divorce. The Act provides that there is only one ground for divorce—that of irretrievable breakdown of a marriage which is established if the husband and wife have separated and have lived apart from each other for 12 months and there is no reasonable likelihood of reconciliation.

Proceedings under the Family Law Act are dealt with by the Family Court of Australia and by certain other courts in the States and Territories. Except in certain areas of Western Australia, Magistrates' Courts and Courts of Petty Sessions have jurisdiction in all proceedings under the Act except for:

- proceedings for dissolution or nullity of marriage; and
- defended proceedings for custody or concerning property worth more than $1,000, unless the parties agree to the matter being heard by a Magistrates' Court or the Court of Petty Sessions.

A State Family Court has been established in Western Australia to deal with family law matters in that State.

Under the Act, great emphasis is placed on the counselling services available through the Family Courts to persons involved in proceedings and to any persons who have encountered marriage problems. It is not necessary to start proceedings to make use of these services.

Family Court of Australia

The Judges of the Family Court are chosen because of their suitability to deal with matters of family law by reason of their training, experience and personality. They do not wear wigs and gowns. Staff attached to the Court include trained counsellors and legally qualified Registrars and Deputy Registrars.

Proceedings under the Act in the Family Court are heard in private. No publicity about any proceedings under the Act is permitted, unless otherwise directed by the Court. The publication of law court lists and law reports, or other publications of a technical character directed to the legal or medical professions, is exempted from this prohibition.

The Family Court aims to be a "helping" court. A Principal Director of Court Counselling and a staff of court counsellors are attached to the Court to help parties to a marriage settle their problems. This help is available to parties who are not even contemplating divorce or other proceedings, but who may need counselling assistance. These services complement those already provided by voluntary marriage counselling agencies. People may approach the Court counselling service directly—in person, in writing, by telephone or through a legal practitioner.

A Court exercising jurisdiction under the Family Law Act is required to have regard to the following principles:

- the need to preserve and protect the institution of marriage as the union of a man and a woman to the exclusion of all others voluntarily entered into for life;
- the need to give the widest possible protection and assistance to the family as the natural and fundamental group unit of society, particularly while it is responsible for the care and education of dependent children;
- the need to protect the rights of children and to promote their welfare; and
- the means available for assisting parties to a marriage to consider reconciliation or the improvement of their relationship to each other and to the children of the marriage.

In relation to the guardianship and custody of children, the Family Law Act provides that both parties to a marriage have, subject to a court order to the contrary, the joint guardianship and custody of any children of the marriage. However, one parent can ask the Court for sole custody of a child even if no divorce has been sought.

In disputes over custody, a child may be separately represented. The paramount consideration for the court in the determination of all such disputes is the welfare of the child. However, where a child has reached 14, the Court may not make an order contrary to his or her wishes unless there are special circumstances. In relation to the welfare of children a divorce decree usually will not become effective unless the Court is satisfied that proper arrangements have been made by the parties for the welfare of their children.

Under the Family Law Act, the right of one party to a marriage to maintenance from the other is based on the needs of the party seeking it and the ability of the other party to pay. An application for maintenance may be made by either husband or wife, and irrespective of whether the parties intend to divorce.

There are specific matters for the Court to consider when it is dealing with maintenance applications. These include:

- the age and state of health of the parties;
- the income, property and financial resources of each of the parties and their financial obligations;
- whether either party is entitled to a pension or superannuation;
- the length of the marriage and what is an appropriate standard of living for each party;
- whether either party has to care for children;
- the extent to which the marriage has affected the earning capacity of the applicant; and
- the possibility of the applicant taking on a training course or further educational course to improve his or her employment prospects.

The Act also provides for the registration and court approval of maintenance agreements made by the parties.

Both parties are liable to maintain their children according to their respective means and the Court is guided by similar considerations in deciding what order to make.

The Court has power to settle disputes about the family assets, including the power to order a transfer of legal interests in property. When dealing with these disputes, the Court considers the interest each party has in the property, the contributions made by each party during the marriage, and the matters the Court is required to consider in dealing with maintenance applications. The Act directs the Court to look both at the financial contributions made by the parties and at the contribution made by either party in the capacity of homemaker or parent.

The Court has pamphlets printed in Arabic, Turkish, Italian, Greek, Serbo-Croat, Mandarin Chinese, Malaysian and Spanish to explain the operation of the new family law.

State and Territory Courts

Australian State and Territory courts have original jurisdiction in all matters brought under State or Territory statute laws, and in matters arising under Federal laws, where such matters have not been specifically reserved to courts of Federal jurisdiction. Most criminal matters, whether arising under Federal, State or Territory law, are dealt with by State and Territory courts.

Each State and Territory court system is organised and operates independently. However, within each system, which comprises both courts of general jurisdiction and specialist courts and tribunals, the courts are organised hierarchically according to the nature of the matters with which they may deal.

Appeals

County and District Courts and State and Territory Supreme Courts have jurisdiction to hear appeals against the decisions of lower courts and some specialist tribunals.

The procedures concerning the right of appeal are laid down by statute in each State and Territory, and appeals may be lodged against matters such as the correctness of the verdict or the severity of the sentence imposed. However, appeals against Supreme Court decisions are heard in most States by a Full Bench of the Supreme Court which usually comprises three judges of the Supreme Court. Appeals from State Supreme Court decisions may be taken to the Federal Court of Australia or the High Court of Australia or the Privy Council depending on the nature of the matter involved. Appeals from decisions of Territory Supreme Courts are taken to the Federal Court of Australia or to the High Court if special leave is given by the High Court.

Special Courts and Tribunals

Each Australian State and Territory administers particular areas of the law through specialist courts or tribunals, such as Small Claims Courts, Licensing Courts, etc. These courts or tribunals deal primarily with civil matters or matters of an administrative nature.

Courts of Marine Inquiry

Matters which come within the jurisdiction of Courts of Marine Inquiry are contained in the *Navigation Act* 1912. The principal areas of jurisdiction are to make inquiries into casualties, all missing ships, or entailing loss of life on or from ships and to charges of incompetency or misconduct.

When the Department of Transport is advised of an incident which may warrant the convening of a Court of Marine Inquiry, the Minister will appoint an officer to conduct a Preliminary Investigation. The officer will conduct interviews with the parties involved and based on the results of these interviews advise the Minister as to whether or not the circumstances warrant a request by the Minister for a Court of Marine Inquiry to be convened. The Governor-General by proclamation establishes the Court of Marine Inquiry. Findings of the Court are forwarded to the Minister as well as any observations the Court thinks fit to make.

Statistics

Information relating to the operation of courts in particular Australian States may be obtained from the respective State Year Books.

Administrative Review

Administrative Appeals Tribunal

The Administrative Appeals Tribunal was established by the *Administrative Appeals Tribunal Act* 1975 and came into operation on 1 July 1976. Its President is a Judge of the Federal Court of Australia. It is an independent tribunal whose function is to review decisions made by Commonwealth Ministers, authorities and officials under certain laws of the Commonwealth. The Tribunal is able to substitute its own decision in those areas in which it has jurisdiction. The Tribunal has jurisdiction under a total of 140 enactments including decisions under the *Social Services Act* 1947, *Compensation (Commonwealth Government Employees) Act* 1971, *Migration Act* 1958, *Customs Act* 1901, *Export Market Development Act* 1974, the Air Navigation Regulations and the *Freedom of Information Act* 1982. Further additions to the Tribunal's jurisdiction are made from time to time.

The Principal Registry is in Canberra and there are Tribunal Registries in each capital city.

The Administrative Review Council was also established by the *Administrative Appeals Tribunal Act* 1975. The principal functions of the Administrative Review Council are to make recommmendations to the Attorney-General on rights of review of administrative decisions and on the procedures of administrative tribunals.

Administrative Decisions (Judicial Review) Act 1977

The *Administrative Decisions (Judicial Review) Act* 1977, which came into operation on 1 October 1980, provides for judicial review in the Federal Court of Australia of administrative action taken under Commonwealth legislation. The Court is empowered where an order of review is sought by an aggrieved person to review the lawfulness of a decision, conduct leading up to the making of a decision or circumstances where there has been failure to make a decision. The grounds on which review may be sought and the powers of the Court are set out in the Act. In many cases, a person who is entitled to seek judicial review in respect of an administrative decision may seek a statement of reasons for the decision from the decision-maker.

Commonwealth Ombudsman

The office of the Commonwealth Ombudsman was established by the *Ombudsman Act* 1976 and commenced operation in June 1977. Additional responsibilities have been given to the office through the *Complaints (Australian Federal Police) Act* 1981 and the Ombudsman Amendment Act (passed in the 1983 Budget session of Parliament). The Ombudsman is empowered to investigate complaints about the administrative actions of Commonwealth Government departments and prescribed authorities, and complaints about the conduct of members of the Australian Federal Police, and its practices and procedures. Under the *Ombudsman Amendment Act 1983* the Ombudsman will also be empowered to investigate complaints from members or former members of the Australian Defence Forces relating to the service in the Defence Forces or as a consequence of a person serving or having served in the Defence Forces. Where the Ombudsman is of the opinion, after completing an investigation into a complaint, that remedial action is required he reports to the department or authority concerned and may include any recommendations he thinks fit to make. If the department or authority fails to comply with a recommendation contained in his report, the Commonwealth Ombudsman may report to the Prime Minister and to the Federal Parliament. The Commonwealth Ombudsman is represented in each State capital city and Darwin.

The Human Rights Commission

The Human Rights Commission was set up by the Commonwealth Government in December 1981 to *promote* and *protect* human rights in Australia. The human rights with which it is concerned are those set out in five United Nations instruments:

- The International Covenant on Civil and Political Rights;
- The Declaration of the Rights of the Child;
- The Declaration on the Rights of Mentally Retarded Persons;

- The Declaration on the Rights of Disabled Persons; and
- The International Convention on the Elimination of All Forms of Racial Discrimination.

The Commission works under two Acts—the *Human Rights Commission Act* 1981 and the *Racial Discrimination Act* 1975.

Under the Human Rights Commission Act the functions of the Commission are fourfold:

(i) to review legislation for its consistency with human rights;
(ii) to inquire into and, where practicable, effect a settlement of issues, including complaints, that have come to its notice;
(iii) to promote understanding, acceptance and public discussion of human rights; and
(iv) to undertake and co-ordinate research and educational programs affecting human rights.

Where the Commission considers a change in Commonwealth law or practice is required, it is to report this to the Attorney-General, and its reports must be made public by tabling in the Parliament.

Under the Racial Discrimination Act, the Commission is charged with functions in relation to racial discrimination similar to those numbered (ii) to (iv) above in relation to human rights generally. Investigation and resolution of complaints made under the Racial Discrimination Act is carried out by the Commissioner for Community Relations on behalf of the Commission.

The Racial Discrimination Act applies regardless of whether the discrimination falls within Commonwealth, State or Northern Territory jurisdiction. The human rights function is related to Commonwealth laws and practices under those laws, although the Human Rights Commission Act provides for co-operation with State agencies in the promotion of human rights.

Freedom of Information Act 1982

The *Freedom of Information Act* 1982 which came into operation on 1 December 1982 has two objectives:

- to make available to the public information about the rules, practices and operations of Commonwealth Government departments and authorities; and
- to create a general right of access to documents in the possession of Ministers and agencies.

In order to achieve these objectives the Act defines the rights of members of the public to obtain access to documents, and sets out a range of obligations and restrictions on departments and the public for exercising these rights.

The right of access does not extend to all documents. Exempt are:

- certain documents to which the *Archives Act* 1982 applies;
- documents affecting national security, defence, international relations and relations with States;
- Cabinet and Executive Council documents;
- internal working documents (subject to certain limitations on what may be exempt);
- documents affecting enforcement of the law and protection of public safety;
- other documents exempt by reason of secrecy provisions of other enactments, financial or property interests of the Commonwealth, personal privacy, legal professional privilege etc.;
- documents made available for purchase or open access upon payment of a fee; and
- documents created before 1 December 1982.

However, there are two exemptions to this last restriction on access:

- a person has a right of access to documents created before 1 December 1982, necessary to the understanding of a document already legally in that person's possession; and
- individuals have the right of access to documents which predate the commencement of the Act by up to five years, providing that the documents relate to the individual.

The public is not required to provide reasons for requesting access to documents. However, all requests under the Act should be in writing and provide such information concerning the document as is reasonably necessary to enable a responsible officer to identify the document. Where a person wishes to make a request or has made a request that does not comply with the provisions of the Act relating to requests for access it is the duty of the agency to take reasonable steps to assist the person to make the request in a manner that complies with the Act.

Provisions exist whereby a person may apply to have an amendment made to information relating to that person's own personal affairs.

Royal Commissions—Commonwealth

Australian Governments have from time to time established Royal Commissions to inquire into, and report on, matters of public concern.

A Royal Commission is established by the Governor-General, on the advice of the Government, issuing a commission to a person or persons to inquire into and report on specified matters. At the end of its inquiry, a Royal Commission presents its report to the Governor-General for consideration by the Government.

The power to issue Letters Patent to inquire is a prerogative of the Crown. The *Royal Commissions Act* 1902 confers powers on a Royal Commission to compel the attendance of persons, the giving of evidence, and the production of papers. It also creates a number of offences (e.g. failure to attend a Royal Commission when summoned, or to produce papers) and gives some protection to Commissioners and witnesses against legal liability. The constitutional foundation of the Royal Commissions Act is section 51 (xxxix) of the Constitution, which provides that the Commonwealth Parliament may make laws with respect to 'matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or office of the Commonwealth'.

LETTERS PATENT ISSUED FROM 1.7.78 TO 30.6.83

Name of Royal Commission	*Commissioner(s)*	*Date of issue of Letters Patent*
Commission of Inquiry into the Efficiency and Administration of Hospitals (joint Commonwealth/ Tasmania/ Queensland/ Western Australia Royal Commission)	Mr J. H. Jamison, O.B.E. (Chairman) Mr C.W.L. De Boos Dr J. S. Yeatman	29 August 1979
Commission of Inquiry into the Viability of the Christmas Island Phosphate Industry	Mr W. W. Sweetland	20 December 1979
Royal Commission on the Activities of the Federated Ship Painters and Dockers Union (joint Commonwealth/Victoria Royal Commission)	Mr F. X. Costigan, Q.C.	10 September 1980
(a) Royal Commission of Inquiry into Drug Trafficking (joint Commonwealth/New South Wales/Victoria/Queensland Royal Commission)	The Hon. Mr Justice D. G. Stewart	(a) 25 June 1981
(b) Royal Commission of Inquiry into the Activities of the Nugan Hand Group (joint Commonwealth/New South Wales Royal Commission)		(b) 28 March 1983
Royal Commission into the Activities of the Australian Building Construction Employees' and Builders Labourers' Federation (joint Commonwealth/Victoria Royal Commission)	Mr J. S. Winneke, Q.C.	20 August 1981
Royal Commission into Australian Meat Industry (joint Commonwealth/Victoria Royal Commission)	The Hon. Mr Justice A. E. Woodward, O.B.E.	12 September 1981
Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam	The Hon. Mr Justice P. G. Evatt, D.S.C.	13 May 1983
Royal Commission on Australia's Security and Intelligence Agencies	The Hon. Mr Justice R. M. Hope, C.M.G.	17 May 1983

FINAL ROYAL COMMISSION REPORTS PRESENTED FROM 1.7.78 TO 30.6.83

Name of Royal Commission	*Date of presentation*	*Tabled in the Parliament*
Royal Commission of Inquiry into Electoral Redistribution of Queensland in 1977	3 August 1978	15 August 1978
Australian Royal Commission of Inquiry into Drugs	21 December 1979	18 March 1980
Commission of Inquiry into the Viability of Christmas Island Phosphate Industry	15 February 1980	20 February 1980
Commission of Inquiry into the Efficiency and Administration of Hospitals	29 December 1980	25 February 1981
Royal Commission into the Activities of the Australian Building Construction Employees' and Builders Labourers' Federation	27 May 1982	20 October 1982
Royal Commission into Australian Meat Industry	17 September 1982	21 September 1982
Royal Commission of Inquiry into Drug Trafficking (Clark Reference)	28 February 1983	31 May 1983

Legal Aid

The purpose of providing legal aid is to ensure that no person involved in a legal dispute or action should be without legal assistance by reason of not being able to pay for it, and is based on the notion of justice and equity before the law.

Legal aid in Australia is delivered through a variety of schemes operated at Federal, State and local levels. The principal schemes are those of the Australian Legal Aid Office, the legal aid commissions (which operate in five States and the Australian Capital Territory) and the Aboriginal legal services. In addition there are numerous community based legal aid agencies and certain law society schemes.

Historically, legal aid schemes in Australia were initiated by State governments with Public Solicitor or Public Defender schemes in Queensland, Victoria and New South Wales. The Law Society in South Australia began a legal assistance scheme in 1933, and law society schemes followed in other States. In 1973 the Australian Legal Aid Office was established to provide legal assistance in the Federal area.

It is now the policy of the Commonwealth Government that legal aid other than that given by Aboriginal legal services and voluntary and community agencies be provided in each State and Territory through a single independent statutory commission, established by State or Territory legislation. Under this policy, legal aid is provided by both salaried and private lawyers and funded by the Commonwealth in Federal matters. The States continue to fund legal assistance provided in relation to State matters. Pursuant to agreements entered into between the Commonwealth and the States, independent statutory commissions providing legal advice and assistance in both Commonwealth and State matters have been established in Queensland, South Australia, Victoria, Western Australia and the Australian Capital Territory. A statutory commission has also been established in New South Wales, but its functions do not extend to Commonwealth matters. Legal aid commissions have not yet been established in Tasmania and the Northern Territory, and in these places, as well as New South Wales, the Australian Legal Aid Office continues to provide legal advice and assistance in Commonwealth matters.

Aboriginal legal services operate in all States and Territories and are funded by the Department of Aboriginal Affairs. Community law centres which also operate in most States are funded by Commonwealth, State and in some instances local government.

The Commonwealth Attorney-General administers a growing area of legal assistance in special federal areas outside the scheme of independent statutory commissions. This assistance is provided under various Commonwealth Acts, (such as the *Conciliation and Arbitration Act* 1904, *Administrative Appeals Tribunal Act* 1975 and the *Trade Practices Act* 1974) and administrative schemes (e.g. aid for Public Interest and Test Cases and for cases involving the recovery of children removed overseas).

The Commonwealth Legal Aid Council, established pursuant to the *Commonwealth Legal Aid Act* 1977 has the broad function of advising the Commonwealth Attorney-General on matters relating to the provision of Legal Aid in Australia. The Council Secretariat is located in the Australian Legal Aid Office Division of the Commonwealth Attorney-General's Department.

Selected details of the income and expenditure of major Australian Legal Aid schemes during 1981–82, and further information on the operation of these schemes are available from Annual Reports of the Commonwealth Legal Aid Council and the Commonwealth Attorney-General's Department or by writing to the Secretary, Commonwealth Legal Aid Council, Attorney-General's Department, Parkes, A.C.T. 2600.

The Police

The primary duties of the police are the prevention and detection of crime, the protection of life and property, and the enforcement of law to maintain peace and good order. In addition, they may perform a variety of other duties in the service of the State, including the regulation of street traffic, acting as clerks of petty sessions, crown land bailiffs, foresters, mining wardens and inspectors under the Fisheries and various other Acts. With the exception of the Australian Federal Police, police forces in Australia are under the control of the State and Northern Territory Governments, but their members perform certain functions for the Commonwealth Government, such as aliens registration officers, and in conjunction with the Australian Federal Police and other Commonwealth officers, they police various Commonwealth Acts and Regulations.

Australian Federal Police

The Australian Federal Police (AFP) was formed in October 1979. It performs normal police duties in the Australian Capital Territory, and is the principal agency for the enforcement of Federal laws, and the protection of Commonwealth Government property, and property and interests at buildings and establishments under Commonwealth Government control, and co-ordinate some of the work of other investigation and law enforcement agencies in Australia. The AFP also attaches officers to the Commonwealth's Island Territories' Police Forces (the Territories of Christmas and Norfolk Islands) and the United Nations Peace-keeping Force in Cyprus.

The AFP operates the Australian Police College at Manly, N.S.W., to provide training for officers of various police forces and other agencies in Australia and New Zealand. The force has its head office in Canberra, and district offices in each State capital.

Police strengths

The active strengths of non-civilian police personnel in police forces in Australia are shown in the following table:

POLICE FORCES

Year	*AFP*	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*
At 30 June—								
1980	2,614	9,400	7,603	4,387	3,423	2,643	1,041	534
1981	2,655	9,468	8,196	4,554	3,220	2,656	1,029	551
1982	2,702	9,532	8,329	4,543	3,249	2,693	1,041	566

Crime Statistics

Selected Offences

Since 1964, the ABS has published a series of 'Selected Offences reported or becoming known to Police'. This series is provided by police, and is based as far as possible on definitions and procedural arrangements agreed to by police authorities for all States and Territories.

The following table shows the number of offences reported or becoming known to police, including the Australian Federal Police, in Australia in each of the seven major categories included in the series.

Drug Offences

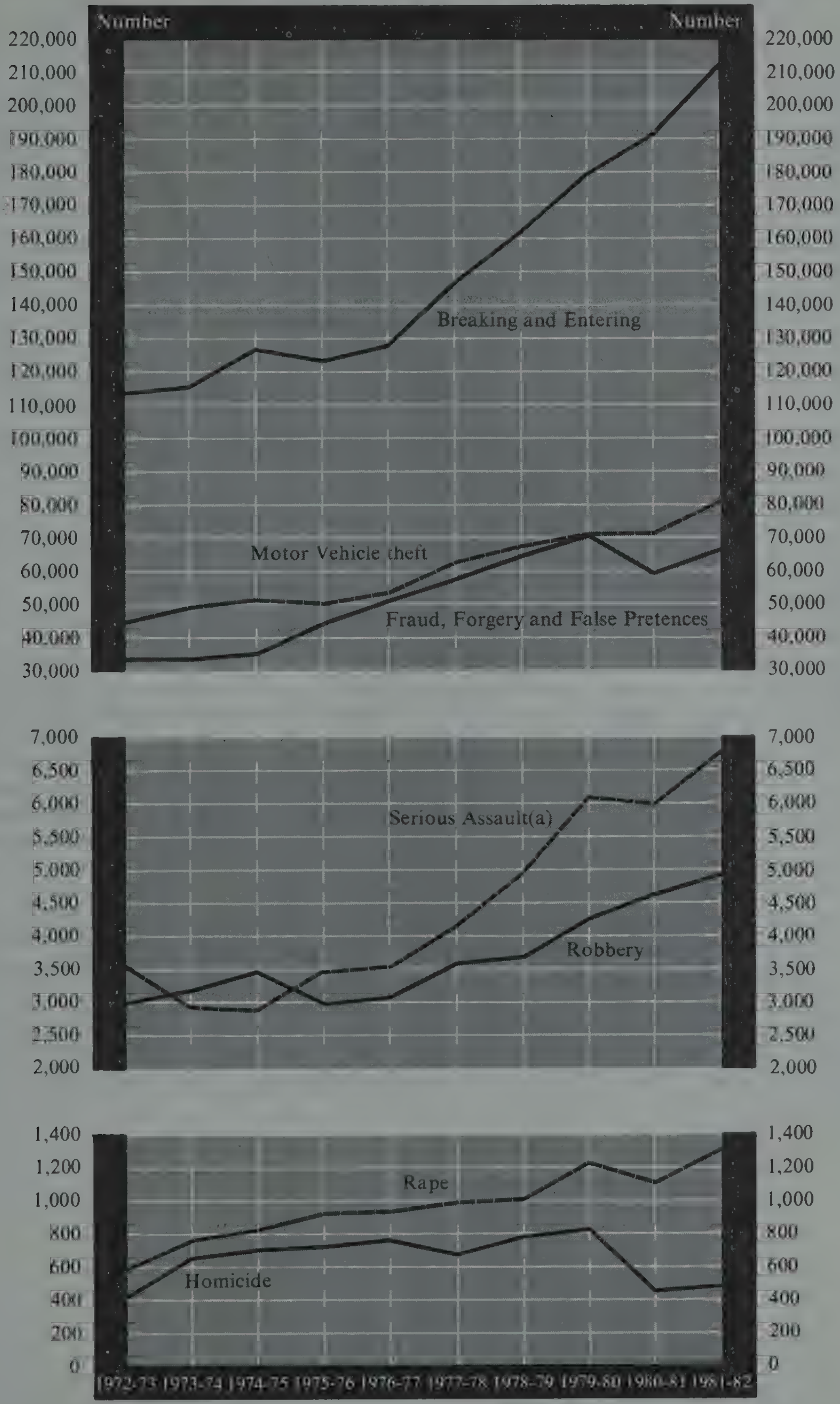
Australia is a signatory to the Single Convention of Narcotic Drugs which has as its main aim the limitation of narcotic drugs to legitimate medical and research purposes.

As its name implies, the Single Convention of Narcotic Drugs covers only the so-called narcotic drugs including cannabis and its derivatives. In recognition that there are other drugs of dependence, the member nations met during 1970 and 1971 and drew up a further Convention to impose controls on psycotropic substances such as hallucinogens, amphetamines, other central nervous system stimulants, barbiturates, tranquillisers and certain other sedatives.

For details of legislative provisions *see* Year Book No. 63, page 218.

The Australian Federal Police serve as the national agency for the systematic collection, collation, evaluation and dissemination of information concerning the illicit drug traffic in Australia. The following extracts are from the detailed statistics published by them in the annual report *Drug Abuse in Australia (A Statistical Survey).*

SELECTED OFFENCES REPORTED OR BECOMING KNOWN TO POLICE, AUSTRALIA, 1972-73 TO 1981-82



(a) From 1980-81 defined as assaults causing grievous or actual bodily harm.

PLATE 33

DRUG AND DRUG-RELATED OFFENCES: NUMBER OF CHARGES(a) INVOLVING SPECIFIC DRUG TYPES: AUSTRALIA 1979 TO 1981

Year	*Possess*	*Import*	*Use/ administer*	*Traffic*	*Steal*	*False pretences*	*Forged scripts*	*Other*	*Total*
Narcotics—									
1979	1,068	73	1,009	414	137	73	379	367	3,520
1980	877	36	783	352	85	114	136	228	2,611
1981	1,186	103	1,003	565	148	287	103	350	3,745
Cannabis—									
1979	10,688	102	3,472	862	23	2	—	2,352	17,501
1980	12,269	95	4,027	1,266	37	—	—	2,584	20,278
1981	15,776	123	5,065	1,623	17	2	—	3,980	26,506
Amphetamines—									
1979	94	1	57	12	12	20	37	12	245
1980	85	—	49	25	—	22	14	6	201
1981	298	2	208	90	—	6	3	17	624
Barbiturates hypnotics—									
1979	359	—	263	53	45	32	104	51	907
1980	224	—	197	59	11	30	65	44	630
1981	143	—	77	26	20	12	37	21	342
Tranquilisers—									
1979	79	—	40	29	34	12	36	18	248
1980	64	1	66	30	11	19	12	17	220
1981	102	—	73	19	20	7	24	18	263
Hallucinogens—									
1979	186	—	40	33	—	—	1	18	278
1980	183	3	32	58	—	—	2	12	290
1981	171	3	39	38	1	1	—	10	263
Other—									
1979	46	—	12	48	30	8	14	14	172
1980	50	—	23	51	24	74	41	22	285
1981	89	1	24	31	16	12	14	17	204
Total—									
1979	**12,520**	**176**	**4,893**	**1,451**	**281**	**147**	**571**	**2,832**	**22,871**
1980	**13,752**	**135**	**5,177**	**1,841**	**168**	**259**	**270**	**2,913**	**24,515**
1981	**17,765**	**232**	**6,489**	**2,392**	**228**	**327**	**181**	**4,333**	**31,947**

(a) Charges arising from offences involving a number of different drug types have been counted under each drug type involved.

Law enforcement in respect of drugs in Australia is handled mainly by the following bodies:

- State and Territory police forces who police State and Territory laws and Commonwealth laws in conjunction with Commonwealth authorities.
- The Australian Federal Police who police Commonwealth laws.
- The Bureau of Customs in the Department of Business and Consumer Affairs which has responsibility for the enforcement of laws controlling importing and exporting of drugs.

The National Standing Control Committee on Drugs of Dependence was established in 1969 by the Commonwealth Government to co-ordinate the activities of the various Commonwealth, State and Territories' bodies participating in the administration of drug laws and control. The role of the Committee is to consider further steps that can be taken by the national and State Governments together to combat all aspects of drug abuse in Australia, including addiction, trafficking, treatment and education.

AGE DISTRIBUTION OF PERSONS CHARGED (a) WITH DRUG AND/OR DRUG RELATED OFFENCES: AUSTRALIA 1979 to 1981

Year	*16 years and under*	*17*	*18–25*	*26–30*	*31–49*	*50 years and over*	*Total*
1979	311	534	7,743	1,783	825	37	11,233
1980	338	558	7,939	1,909	923	49	11,716
1981	520	778	10,052	2,636	1,333	49	15,368

(a) Persons counted only once, regardless of the number of occasions on which charged during the year.

Correctional Treatment of Offenders

The term 'corrections' (and its derivatives) as used here refers to the treatment of offenders within the justice system.

While there is a variety in the types of correctional activities employed in each State and Territory, such activities can be broadly categorised into two groups:

- non-continuing forms of treatment, where, if the offender meets the requirements set by court, then correctional agencies would not normally become actively involved. Examples of these forms of treatment are fines, bonds, recognisances without supervision.
- continuing forms of treatment, where the offender is subject to some form of control by a correctional agency, usually for a specified period. This control may take the form of:
  - (i) full time custody, as in the case of persons detained in prisons, or other institutions, or
  - (ii) non-custodial treatment involving conditions to be observed by the offender, e.g. probation and parole. In recent years there has been a trend towards the greater use by courts of non-custodial treatment of offenders. This has seen the development of a range of programs such as periodic/weekend detention, attendance centre programs, and community service, under which the offender is at liberty in the community, but is required to report for weekend detention, training, counselling, or to perform unpaid work in the community.

Separate provisions exist in each State and Territory for the treatment of juvenile offenders, and courts and correctional agencies have a wide choice in the types of correctional treatments available to them. Both custodial and non-custodial correctional activities are employed, but greater flexibility allows treatment to be more closely aligned to individual requirements.

Each State and the Northern Territory operates its own prisons and other correctional services. Convicted adult prisoners from the A.C.T. serve their sentences in N.S.W. prisons, but local provision is made for the short-term custody of remand prisoners, and for probation and parole services. The Federal Government does not operate any prisons or other correctional services, and Federal offenders (i.e. persons convicted of offences under Federal laws) fall within the jurisdiction of State agencies for correctional purposes.

Information relating to correctional services in each State is available from the annual reports of the respective authorities and certain data are also published monthly by the Australian Institute of Criminology on adults and juveniles in detention, and adult probationers and parolees.

National Prison Census

The Australian Institute of Criminology in conjunction with State prison administrators conducted the first National Prison Census at 30 June 1982. The following table is an extract from the published results of that census.

NUMBER OF PRISONERS BY JURISDICTION, AGE(*a*) AND SEX, 30 JUNE 1982

Age-group	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Under 16 Years	1	5	..	..	1	..	..	..	7
16 Years	1	..	..	1	..	1	3	..	6
17 Years	13	29	23	3	13	3	10	..	94
18 Years	130	55	60	20	64	10	17	1	357
19 Years	189	72	76	45	86	22	21	1	512
20-24 Years	1,142	498	454	268	400	76	100	2	2,940
25-29 Years	831	417	352	184	351	57	69	..	2,261
30-34 Years	606	256	244	107	188	28	35	..	1,464
35-39 Years	330	184	186	74	103	14	31	..	922
40-44 Years	207	120	106	52	56	10	7	1	559
45-49 Years	126	42	58	30	47	5	9	..	407
50-54 Years	79	36	35	8	19	3	7	..	188
55-59 Years	31	26	30	11	15	3	3	..	119
60-64 Years	26	11	8	3	2	4	..	..	54
65 Years and over	7	2	6	6	5	..	..	..	26
Total Persons	3,719	1,753	1,638	812	1,350	237	312	5	9,826
Total Males	3,582	1,699	1,594	796	1,286	233	296	5	9,491
Total Females	137	54	44	16	64	4	16	..	335

(*a*) The tabulation shows the age-structure of the prison populations as at 30 June 1982. The age at which persons normally become liable to imprisonment in an adult prison varies from State to State, being seventeen years in Victoria, Queensland, Tasmania and Northern Territory, and eighteen years in the other jurisdictions, although younger persons who have been convicted of a particularly serious offence may also be sent to adult prisons. Persons in juvenile institutions were specifically excluded from this census.

(*Source:* Australian Institute of Criminology *Australian Prisoners 1982* by John Walker and David Biles)

Criminological Research

The Australian Institute of Criminology

The Australian Institute of Criminology, which is located in Canberra (telephone (062) 82 2111), was established as a statutory authority under the *Criminology Research Act* 1971. The Institute is administered by a Director and a Board of Management comprising three members appointed by the Federal Attorney-General, and three members representing the States, who are appointed by the Criminology Research Council.

Among the functions of the Institute as defined in the Criminology Research Act are:

- to conduct criminological research (i.e. research in connection with the causes, prevention and correction of criminal behaviour and related matters), and communicate the results of such research to the Commonwealth and States;
- to advise on the needs for, and programs of, criminological research, and give advice and assistance in relation to any research funded through the Criminology Research Council;
- to conduct seminars and courses of training and instruction for persons engaged in criminological research or work related to the prevention or correction of criminal behaviour;
- to provide advice in relation to the compilation of statistics in relation to crime; and
- publish material resulting from, or relating to its activities.

Since its inception the Institute has undertaken directly, or through the Criminology Research Council actively assisted and advised on, an extensive range of criminological research projects, and has conducted, or been represented at, numerous national and international conferences dealing with crime related matters. In addition, the Institute maintains a comprehensive library of criminological material which is available to researchers and criminal justice practitioners.

Major publications of the Institute during 1982–83 included *Political Terrorism* by Grant Wardlaw, *Protecting the Protectors* by Bruce Swanton, *Australian Prisons 1982* by John Walker and David Biles, *Sentencing the Federal Drug Offender* by Ivan Potas and John Walker, and *Police Source Book* by Bruce Swanton, Garry Hannigan and David Biles.

Each year the Institute conducts from 15 to 20 national seminars. Topics covered by seminars during 1982–83 included: arson; delinquency prevention; retailers as victims of crime; compensation schemes; and research undertaken by criminologists and the police.

The Criminology Research Council

The Criminology Research Council, comprised of representatives from the Commonwealth and each State, is an independent body corporate also established under the *Criminology Research Act*

1971. The Council is responsible for the control and administration of the Criminology Research Fund, which is funded fifty percent by the Federal Government, and fifty percent by State Governments on a pro-rata population basis. Subject to the Council's assessment of a project, persons seeking to conduct criminological or related research may be provided with a grant from the Fund.

Since its establishment the Council has provided grants for over 100 separate research projects covering nearly all aspects of crime and criminal justice in Australia. Council-funded research is generally located in specific regions and may involve primary data gathering. By contrast, the research undertaken by the Institute itself is generally national and comparative in nature and makes use of existing data sources.

Bankruptcy and Copyright

Bankruptcy

For a description of the provisions of the *Bankruptcy Act* 1966, *see* Year Book No. 55, pages 586–7. The Act was amended in 1970 to remove any obstacle the Act might present to the operation of compositions or schemes of arrangements entered into under State or Territory legislation providing assistance to farmers in respect of their debts. Details for each Australian State have been published in the Annual Report by the Minister for Consumer and Business Affairs on the operation of the Act.

Copyright

Copyright is regulated by the Commonwealth *Copyright Act* 1968 which came into force on 1 May 1969. The Act does not contain any provisions requiring or enabling the completion of formalities (such as publication, registration or the payment of fees) in order to obtain copyright protection in Australia. Protection is granted automatically from the moment of making a work or other subject matter.

The Act has been amended from time to time. The *Copyright Amendment Act* 1980, in particular, contains substantial changes in a number of areas including fair dealings, copying by libraries and archives, and copying for educational purposes and for handicapped readers.

Copyright is administered by the Attorney-General's Department.

BIBLIOGRAPHY

Australian Constitutional Law

The Australian Constitution Annotated, Attorney-General's Department, Australian Government Publishing Service, Canberra, 1980

Howard, Prof. Colin, *Australia's Constitution,* Penguin, Melbourne, 1978

Lane, Prof. P. H., *An Introduction to Australian Constitutional Law,* The Law Book Company Limited, Sydney, 1967

Lane, Prof. P. H., *An Introduction to the Australian Constitution,* 2nd ed., The Law Book Company Limited, Sydney, 1977

Sawer, Prof. Geoffrey, *The Australian Constitution,* Australian Government Publishing Service, Canberra, 1975

Federal Parliament

An Introduction to the Australian Federal Parliament, Angus and Robertson, Sydney, 1956

Crisp, Prof. L. F., *Australian National Government,* 4th ed., Longman Cheshire Pty Ltd, Melbourne, 1976

Odger, J. R. *Australian Senate Practice,* 5th ed., Australian Government Publishing Service, Canberra, 1976

Pettifer, J. A. (ed.), *House of Representatives Practice,* Australian Government Publishing Service, Canberra, 1981

Law and the Australian Legal System

Baalman, John, *Outline of Law in Australia* (4th ed. by Geoffrey A. Flick), The Law Book Company Limited, Sydney, 1979

Bates, Nicholas, *Introduction to Legal Studies,* 3rd ed., Butterworths, Melbourne, 1980.

Gifford, D. J. and Kenneth H. Gifford, *Our Legal System,* The Law Book Company Limited, Sydney, 1981.

Marsh, S. B., I. P. Predl and P. A. Ward, *Outlines of Law—Australian Edition,* McGraw-Hill Book Company, Sydney, 1972

Ross, Stan and Mark Weinburg (eds), *Law for the People: A Citizen's Guide to the Law in Australia and New Zealand,* Penguin Books, Melbourne, 1976

Sawer, Prof. Geoffrey, *The Australian and the Law,* Penguin Books, Melbourne, 1976

Twyford, John, *The Layman and the Law in Australia,* 2nd ed., Doubleday, Sydney, 1980

CHAPTER 12

EDUCATION

State and Commonwealth Government responsibilities in education

The governments of the six Australian States and the Northern Territory have the major responsibility for education, including the administration and substantial funding of primary, secondary and technical and further education. The Commonwealth Government is directly responsible for education services in the Australian Capital Territory, administered through an education authority, and for services to Norfolk Island, Christmas Island and the Cocos (Keeling) Islands. The Commonwealth Government provides supplementary finance to the States and is responsible for the total funding of universities and colleges of advanced education. Apart from its financial role, the Commonwealth is involved in initiating and co-ordinating policy and in maintaining a national perspective.

The State Governments administer their own systems of primary, secondary and technical and further education through government departments responsible to State Ministers. In three States, a single Education Department is responsible for these three levels of education. In New South Wales and South Australia, there is a separate department responsible for technical and further education. In Victoria, the Education Department's former responsibility for technical and further education has passed to a Post-Secondary Technical and Further Education Board. In New South Wales the Education Commission advises the Minister on primary, secondary and further education.

Detailed information on the education systems of the States may be found in the respective State year books. Chapter 27 of this Year Book provides details of the situation in the Territories.

Administrative structure of education at the national level

As mentioned above, the Commonwealth Government has direct responsibility for education only in the Australian Capital Territory and the external Territories. The Commonwealth Government, however, has special responsibilities for the Aboriginal people and for migrants, as well as the power to provide assistance for students. Moreover, the Commonwealth Government is responsible for international relations in education. From 11 March 1983, the former Commonwealth Department of Education became the Department of Education and Youth Affairs. The Department's activities now include the administration of schemes of student assistance, international education, some aspects of migrant education, language policy and Aboriginal education and youth policy. The Department also liaises with the media and community groups and produces a range of publications relating to education in Australia. Selected publications are listed at the end of this chapter.

The Australian Constitution empowers the Commonwealth Government to make grants to the States and to place conditions upon such grants. This power has been used to provide financial assistance to the States specifically for educational purposes. There are two national education commissions which advise the Commonwealth Government on the needs of educational institutions throughout Australia for the purposes of financial assistance: the Commonwealth Schools Commission, which was established in 1973; and the Commonwealth Tertiary Education Commission, which comprises a Commission concerned with co-ordination and inter-sectoral matters, and three Councils on universities, advanced education and technical and further education.

Generally, the Commissions are required to consult with State authorities (and, in the case of the Commonwealth Schools Commission, with the authorities conducting non-government schools) and such other persons, bodies and authorities as they think necessary before making recommendations to the Commonwealth Government on the amount of financial assistance required, both in general and for specific purposes, to meet the needs of each sector.

The needs for financial assistance for pre-school and child care facilities are considered at the national level by the Office of Child Care within the Commonwealth Department of Social Security.

The *National Aboriginal Education Committee* advises the Commonwealth Department of Education and other government departments and bodies on the educational needs of Aboriginals from pre-school to tertiary level. The NAEC's consultative process has been developed to a stage whereby the views of Aboriginal people regarding their needs in education can be clearly expressed at both State and national levels.

Commonwealth Government education authorities also function as co-ordinating agencies for joint activity by the States and Territories in a number of fields. For example, the *Australian Council on Awards in Advanced Education* seeks, in consultation with State co-ordinating bodies, to establish consistency in awards in advanced education by establishing, maintaining and publishing a register of such awards.

A number of bodies at the national level have an important co-ordinating, planning or funding role.

- The *Australian Education Council,* comprising the Commonwealth and State Ministers for Education, normally meets three times in each two years as a consultative body to consider matters of mutual interest, such as the material and personnel needs of schools and co-operation in educational developments generally. It is assisted by a Standing Committee consisting of senior officials including the Directors-General of Education in each State and the Secretary of the Commonwealth Department of Education and Youth Affairs.
- The *Conference of the Directors-General of Education* normally meets twice each year. Matters discussed and decisions reached at the Conference have a direct influence in each State and Territory on such matters as pre-service and in-service education of teachers, school staffing, curricula, special education, building programs, administrative procedures and the extent of uniformity and diversity between education systems. Under the auspices of the Directors-General Conference, regular meetings of senior specialist personnel are held.
- The *Australian Council for Educational Research* (ACER) is an independent national research organisation. The Council is funded by annual grants from each of the State Governments and the Commonwealth Government, as well as from its own activities. The Council is involved in its own and contract research in co-operation with education systems and plays a central role in the development, production and distribution of tests and other measuring instruments, on research into teaching and learning and into the broad foundations of education. The ACER acts as the Australian national centre for the program of international surveys of student achievement conducted by the International Association for Evaluation of Education Achievement (IEA).

There are also a number of non-government organisations which have a co-ordinating role in education at the national level. These include the *National Catholic Education Commission,* the *National Council for Independent Schools,* the *Australian Vice-Chancellors' Committee,* the *Australian Conference of Principals of Colleges of Advanced Education*, the *Conference of Directors of TAFE* and the *Australian High School Principals' Association.* Teachers at various levels have national organisations, as do some community and parental groups. The Australian Union of Students is a national organisation for tertiary students. (For further details *see* the *Australian Education Directory,* published by the Commonwealth Department of Education and Youth Affairs).

STUDENT ASSISTANCE SCHEMES FUNDED BY THE DEPARTMENT OF EDUCATION AND YOUTH AFFAIRS

Scheme	*Number of students 1982*	*Expenditure ($'000) 1981–1982*
Postgraduate Awards(*a*)	2,026	12,567
Tertiary Education Assistance(*b*)	86,541	190,709
Secondary Allowances(*b*)	27,025	29,815
Adult Secondary Education Assistance(*b*)	2,097	5,422
Aboriginal Secondary Grants(*b*)	19,964	21,627
Aboriginal Study Grants(*b*)	9,861	13,842
Aboriginal Study Grants—Overseas(*b*)	10	144
Assistance for Isolated Children(*b*)	19,838	20,764
Non-State Tertiary Institutions	n.a.	238

(*a*) For this scheme, the 'number of students' represents students receiving benefits at 30 June each year. (*b*) For this scheme the 'number of students' represents students receiving benefits at some time during the year.

New developments in education

In 1983 the Commonwealth Government announced a new program with the twin objectives of increasing participation beyond the compulsory years of secondary schooling and of introducing greater equity in the overall provision for young people. The *Participation and Equity Program* which is to commence in 1984 is directed towards bringing about wide-ranging changes in schools so as to enable them to offer all students, especially those from a disadvantaged background, a rewarding, useful education through to the end of secondary schooling. The program is directed particularly to secondary schools with low retention rates and seeks to foster more equal outcomes of schooling.

Another significant development was the Commonwealth Government's decision to reactivate the national Curriculum Development Centre (CDC) as an agency within the Commonwealth Schools Commission. The main purpose of this new arrangement is to align the CDC activities closely with the Commission's program priorities. The CDC's functions are to concentrate on co-ordination and dissemination and on sponsoring the development of materials through contract arrangements with other agencies.

Pre-school education

All States and Territories except one have a policy of making pre-school education universal for children in the years prior to school entry. A majority of the States and Territories have made considerable progress towards this goal. Most pre-schools are conducted on a sessional basis (i.e., sessions of two to three hours for two to five days per week). Pre-school programs generally favour the free play approach with emphasis on children's social and emotional development through creative activities. Parents often contribute by assisting at some sessions or by the purchase of play materials and educational resources. Attendance fees are not usually charged in those States where pre-schools are government-run, but in others, fees may be payable to private or voluntary organisations.

Primary and secondary education

Compulsory education

School attendance is compulsory throughout Australia between the ages of 6 and 15 years (16 years in Tasmania). Each State or Territory has its own specific requirements. The majority of children commence primary school at about 5 years of age, except in Western Australia, where they start at 6 years. Primary schooling generally begins with a preparatory or kindergarten year, followed by 12 grades to complete a full secondary course of study. The final two years of schooling fall outside the compulsory stage of education, but at least half the students in Year 10 remain for a further year's study and over a third complete Year 12.

Non-Government Schools

All children between the prescribed ages must attend either a government school or some other recognised educational institution. While the majority of Australian children attend government schools, about one in four attend non-government schools at some stage of their school life. In the last few years enrolments in the non-government sector have increased to 711,682 in 1982 i.e. almost 24 per cent of all school enrolments. Non-government schools operate under conditions determined by government authorities, usually registration boards, in each State and Territory. These conditions require that minimum education standards are met and that the schools have satisfactory premises. The majority of non-government schools are Catholic and there is a Catholic Education Commission in each State and at the national level. Most other non-government schools are under the auspices of, or run by, other religious denominations. The capacity of the Commonwealth Government to assist with the cost of educating children in denominational schools throughout Australia was upheld by the High Court in 1981.

Funding of schools

Primary and secondary education is free in government schools in all States and Territories. Fees for the hire of textbooks and other school equipment, however, may be charged, particularly in secondary schools. Most State Governments provide financial assistance to parents under specified conditions for educational expenses. Assistance includes various types of scholarships, bursaries, transport and boarding allowances, many of which are intended to assist low-income families. The Commonwealth Government also provides a number of schemes of assistance to facilitate access to education. The *Secondary Allowances Scheme* (SAS), which assists families on lower incomes to maintain their children in Years 11 and 12, has been considerably expanded recently: the allowance is to rise by 20 per cent and the number of students assisted is projected to rise from 53,000 in 1983 to 58,000 in 1984. This scheme and others are listed in the statistical table dealing with Student Assistance Schemes (*see* page 226). In addition some non-government schools offer scholarships and bursaries to assist students.

State Governments provide the bulk of funds for government schools out of general revenue and make per capita grants to non-government schools. About one-sixth of the total funding of schools is now provided directly by the Commonwealth through the Commonwealth Schools Commission, which, in consultation with the States, advises the Commonwealth Government on the resource needs of both government and non-government schools. For further details, *see* Expenditure on education, page 240.

School organisation and operation

Primary schooling provides a general elementary program lasting for 7 or 8 years, until Years 6 or 7. Students enter secondary schools at Year 7 in some State systems and at Year 8 in others. Secondary education is generally comprehensive and co-educational. Most students attend schools reasonably near to their homes. Usually primary and secondary schools are separate institutions, but in some country areas there are area or central schools which provide both forms of schooling. Non-government schools follow a similar pattern, but a significant though declining proportion are single-sex institutions. In Tasmania and the Australian Capital Territory, attendance for the final two years of government schooling is at separate secondary colleges.

Generally, schools in Australia have a considerable degree of autonomy. Most State Departments have established regional administrations which are responsible for matters such as planning school buildings and deploying staff while a central curriculum unit provides general guidelines on course planning. In general, individual schools determine teaching and learning approaches within the guidelines and offer options within resources available and the attitudes and interests of students. Some systems encourage school-based curriculum development and, in the case of the Australian Capital Territory, school-based assessment in place of external examinations. While schools usually have a parents' association, there has been encouragement of greater community participation in general decision-making at school level in some systems through parent representation on school councils and boards.

Specialist services and programs provided in schools include educational or vocational counselling by a permanent or visiting teacher, English as a Second Language program by specialist teachers (especially in schools with significant numbers of children from non-English speaking backgrounds), special programs designed to assist Aboriginal schoolchildren (including the widespread use of Aboriginal teacher aides and bilingual education programs in communities where the children's first language is an Aboriginal language), a variety of programs for gifted and talented children and remedial assistance for children with learning difficulties.

Primary education

In the lower primary years the main emphasis is on the development of basic language and literacy skills, simple arithmetic, moral and social education, health training and some creative activities.

In the upper primary years there is development of the skills learned in the earlier years. English, mathematics, social studies, science, music, art and craft, physical education and health are studied. There are also optional subjects such as religious instruction and, in some schools, foreign and community languages and instrumental music.

Students in Australian primary schools usually have only one teacher for all subjects, and are promoted each year on the basis of completing the previous year, rather than on achievement. In schools where open plan learning styles have been adopted, the method of team teaching (more than one teacher to a class) and multi-age grouping of students is often practised.

Secondary education

In some systems the first one or two years of secondary school consist of a general program which is followed by all students, although there may be some electives. In later years a basic core of subjects is retained with students being able to select additional optional subjects. In other systems students select options from the beginning of secondary school.

The core subjects in all systems are English, mathematics, science and, usually, a humanities or social science subject. Optional subjects may include for example, a foreign language, a further humanities or social science subject, commerce, art, crafts, music, home economics, a manual arts subject, agriculture, physical education or health education. Some schools offer optional courses in subjects such as consumer education, conversational foreign languages, shorthand, typewriting, road safety, drama and leisure-time activities.

In senior secondary years a wider range of options is available in the larger schools and there is an increasing trend towards encouraging individual schools to develop courses suited to the needs and interests of their students, subject to accreditation and moderation procedures.

Victoria is the only State which retains a system of secondary technical education. These schools offer a wide range of elective technical subjects. In the Northern Territory three Aboriginal residential colleges assist Aboriginals to participate in secondary education.

Students in Australian secondary schools generally have different teachers for each separate subject area, though, like primary schools, variations may occur where open planned or more flexible methods have been adopted. Promotion is, again, generally chronological, but students may be grouped according to ability after an initial period in unstreamed classes.

Examinations and assessment at each level are carried out by individual schools except Year 12 in the systems which have retained external examinations at Year 12 level. Students attaining the minimum school leaving age may leave school and seek employment, or enrol in a vocationally oriented course in a technical and further education (TAFE) institution or a private business college. For many TAFE courses, completion of Year 10 of secondary school is a minimum entry requirement. For those continuing to the end of secondary school (Year 12), opportunities for further study are available in TAFE institutions, universities, colleges of advanced education and other post-school institutions. The latter include non-government teachers colleges and a few single purpose institutions such as the Australian Film and Television School, the Australian Maritime College and the National Institute of Dramatic Art.

Students' eligibility for entry to universities and colleges of advanced education is assessed during, or at the end of, the final two years of secondary schooling. In Victoria the standard basis for admission to higher education is public examination results. Four other States and the Northern Territory use different combinations of school assessment and public examinations. In Queensland and the Australian Capital Territory eligibility to enter higher education is determined from moderated and standardised school assessments. Several education systems are currently reviewing their senior secondary school assessment procedures.

Other schooling arrangements

Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition. Special schools are available in larger centres for socially, physically and mentally handicapped children in cases where they are not catered for in special or regular classes in ordinary schools.

In addition to correspondence tuition there are other provisions for children in isolated areas. Schools of the Air operate in New South Wales, South Australia, Queensland, Western Australia and the Northern Territory. Schooling for the children of Aboriginal groups in remote areas of the Northern Territory is conducted by Aboriginal teaching assistants supported by visiting teachers from established schools.

Special education is mainly provided by State Governments in specialist schools, in special classes or units in regular schools or by withdrawal from regular classes for periods of intensive assistance by special staff. In all States and particularly in New South Wales, Queensland and Victoria, parents have formed voluntary organisations to establish additional schools catering for their childrens' special needs. The Commonwealth Government, through the Commonwealth Schools Commission, provides funds to State authorities to assist in the upgrading of special education facilities.

Boarding facilities are available at some non-government schools mainly in the larger towns and cities. A small number of government schools, in particular those catering for special groups such as Aboriginals, have residential hostels close by.

SCHOOLS, STUDENTS AND TEACHERS BY CATEGORY OF SCHOOL(*a*), 1982

		Non-government schools			
	Government schools	*Roman Catholic*	*Anglican*	*Other*	*Total*
Number of schools	7,556	1,698	96	518	2,312
Number of students—					
Males	1,171,510	272,500	33,330	50,140	355,960
Females	1,111,460	274,510	27,770	53,440	355,720
Persons	**2,282,970**	**547,010**	**61,100**	**103,570**	**711,680**
FTE of teachers(*b*)—					
Males	62,404	9,169	2,122	3,113	14,403
Females	87,162	18,741	2,134	4,017	24,892
Persons	**149,566**	**27,911**	**4,256**	**7,128**	**39,295**

(*a*) The data series for the government and non-government sectors for 1982 vary in scope and coverage and care should be taken in drawing comparisons between the two sectors. All student numbers have been rounded to the nearest unit of ten. (*b*) Full-time teaching staff plus full-time equivalents of part-time teaching staff.

STUDENTS BY CATEGORY OF SCHOOL AND SEX, 1977 to 1982

	1977	*1978*	*1979*	*1980*	*1981*	*1982(a)*
			GOVERNMENT SCHOOLS			
Males	1,211,130	1,212,500	1,201,130	1,189,630	1,179,430	1,171,510
Females	1,138,180	1,141,920	1,135,590	1,128,440	1,119,980	1,111,460
Persons	**2,349,310**	**2,354,420**	**2,336,720**	**2,318,080**	**2,299,400**	**2,282,970**
			NON-GOVERNMENT SCHOOLS			
Males	312,820	317,130	324,220	332,930	344,020	355,960
Females	317,020	321,070	325,990	333,560	343,980	355,720
Persons	**629,840**	**638,210**	**650,210**	**666,490**	**688,000**	**711,680**
			TOTAL SCHOOLS			
Males	1,523,950	1,529,630	1,525,350	1,522,560	1,523,450	(*a*)
Females	1,455,200	1,463,000	1,461,580	1,462,000	1,463,950	(*a*)
Persons	**2,979,150**	**2,992,630**	**2,986,930**	**2,984,560**	**2,987,400**	(*a*)

(*a*) The government and non-government school sectors have not been totalled for 1982 as the government statistics for 1982 vary in scope and coverage. They are not comparable with either the non-government sector for 1982 or the government and the non-government sectors for the years 1977 to 1981. For further details *see National Schools Collection, Government Schools, Australia 1982* (4215.0).

Note. All student numbers have been rounded to the nearest unit of ten.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY AGE AND SEX, AUSTRALIA, 1982

(July school census)

	Government schools			*Non-government schools*		
Age last birthday (years)	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Under 6	77,720	74,440	152,170	22,010	22,130	44,140
6	95,380	90,110	185,490	25,480	24,830	50,310
7	99,040	93,540	192,590	26,440	25,840	52,280
8	102,720	96,610	199,330	27,440	26,750	54,190
9	106,950	101,060	208,010	28,050	27,620	55,670
10	112,060	106,900	218,960	30,420	29,700	60,120
11	113,140	107,850	220,990	31,190	31,170	62,350
12	102,950	96,320	199,270	33,420	33,690	67,110
13	100,750	93,930	194,680	33,490	34,210	67,700
14	96,600	90,010	186,610	31,600	31,860	63,460
15	82,680	77,890	160,570	28,640	29,280	57,910
16	50,580	50,230	100,820	21,410	22,720	44,130
17	23,490	25,920	49,410	13,670	13,880	27,550
18	5,480	4,660	10,140	2,300	1,750	4,050
19 and over (*a*)	1,940	1,990	3,930	410	310	720
Total all ages	**1,171,510**	**1,111,460**	**2,282,970**	**355,960**	**355,720**	**711,680**

(*a*) Students whose ages were unspecified have been included in the *19 and over* age group.

Note: (i) The data series for the government and non-government sectors for 1982 vary in scope and coverage and care should be taken in drawing comparisons between the two sectors.

(ii) All student numbers have been rounded to the nearest unit of ten.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS BY YEAR OF EDUCATION, AND SEX, AUSTRALIA, 1982

(July school census)

Year of education	*Government schools*			*Non-government schools*		
	Males	*Females*	*Persons*	*Males*	*Females*	*Persons*
Primary—						
Pre-year 1 (*a*)	61,870	57,850	119,710	19,460	19,010	38,480
Year 1	100,580	93,030	193,600	26,230	25,210	51,440
Year 2	100,770	94,400	195,170	26,730	25,840	52,560
Year 3	102,970	96,820	199,790	27,530	26,720	54,250
Year 4	106,030	100,150	206,170	27,940	27,700	55,650
Year 5	110,750	105,860	216,610	30,290	29,370	59,660
Year 6	111,150	106,890	218,040	30,650	30,290	60,940
Year 7 (*b*)	39,700	37,920	77,620	9,190	9,050	18,240
Ungraded special	6,070	3,660	9,730	1,280	990	2,270
Ungraded non-special	4,240	2,620	6,860	320	300	610
Total primary	744,110	699,200	1,443,310	199,620	194,470	394,090
Secondary—						
Year 7 (*c*)	63,910	59,320	123,230	23,410	23,970	47,380
Year 8	100,590	94,780	195,370	33,580	34,200	67,780
Year 9	95,280	89,650	184,920	31,760	32,190	63,950
Year 10	85,450	82,220	167,680	29,700	30,600	60,300
Year 11	46,200	49,170	95,360	21,420	22,800	44,210
Year 12	25,480	30,670	56,150	16,230	17,270	33,500
Ungraded special	1,310	740	2,050	150	130	280
Ungraded non-special	2,070	1,260	3,330	110	100	200
Total secondary	420,290	407,800	828,080	156,350	161,250	317,600
Ungraded special not identified as primary or secondary	7,110	4,460	11,580	—	—	—
Total	**1,171,510**	**1,111,460**	**2,282,970**	**355,960**	**355,720**	**711,680**

(*a*) Pre-year 1 comprises *Kindergarten* in N.S.W. and A.C.T., *Preparatory* in Vic. and Tas., *Reception* in S.A. and *Transition* in N.T. (*b*) *Year 7* is primary education in Qld, S.A., W.A. and N.T. (*c*) *Year 7* is secondary education in N.S.W., Vic., Tas. and the A.C.T.

Note: (i) The data series for the government and non-government sectors for 1982 vary in scope and coverage and care should be taken in drawing comparisons between the two sectors.
(ii) All student numbers have been rounded to the nearest unit of ten.

Tertiary Education

Since 1974 tertiary education has been free for award courses in universities, colleges of advanced education and technical and further education institutions (Streams 1–5). At the national level, the Commonwealth Government through its Department of Education and Youth Affairs provides a number of schemes of assistance for Australian students to facilitate access to education. A brief description of these schemes was given in the 1980 Year Book and a list of these schemes is included in the statistical table 'Student Assistance Schemes Funded by the Department of Education and Youth Affairs' (see page 226).

Technical and further education (TAFE)

The major part of technical and further education in Australia is provided in government administered institutions variously known as colleges, schools, or centres of technical and further education. There is also some TAFE provision in some colleges of advanced education, agricultural colleges and adult education authorities. These institutions are spread widely throughout Australia in both metropolitan and country areas. They vary greatly in size and in the scope of their educational provisions, though the largest tend to be located in metropolitan regions. TAFE institutions operate from early February to mid-December, in either three terms or two semesters depending on the institution.

Each of the States provides the bulk of the finance for its own institutions. The Commonwealth Government provides supplementary funds to the States on the basis of recommendations from the Commonwealth Tertiary Education Commission.

Government TAFE institutions offer an extremely wide range of vocational and non-vocational courses. Courses may be designed to supplement previous training, to provide specialised instruction in particular aspects of job skills, pre-vocational training prior to employment, preparatory or bridging instruction to permit entry to a chosen vocational course or adult education for personal interest, leisure or general enrichment purposes. Courses may be classified into the following six streams: professional, para-professional, trades, other skilled, preparatory and adult or further education. Courses in the first two streams lead to the award of a diploma or associate diploma, in the third and fourth streams to a certificate, while the less formal shorter courses in the fifth and sixth streams do not lead to any qualification. The majority of TAFE courses are part-time, concurrent with employment, but there is also provision for full-time and external study.

There are additionally some non-government bodies which offer technical and further education of a non-apprenticeship nature. Business colleges offer courses in secretarial studies, while agencies such as the Workers Educational Association and a range of voluntary groups help meet adult education needs in the community.

The Commonwealth Tertiary Education Commission conducts an annual TAFE statistical collection. The 1981 Collection incorporated a new collection of student statistics for TAFE to replace the former collection which had operated since 1974. The statistics are not compatible with those of earlier years as a key feature of the new collection is its emphasis on the individual *student* as the unit of reporting rather than on enrolment.

TECHNICAL AND FURTHER EDUCATION: INSTITUTIONS BY TYPE OF INSTITUTION, 1981

(*Source:* Commonwealth Tertiary Education Commission)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Type of institution—									
Major TAFE Authorities—									
Major institutions (*a*)	87	33	21	34	35	7	5	5	227
Annexes (*b*)	212	17	9	556	—	1	3	—	798
Other institutions (*c*)	56	218	—	—	86	3	5	8	376
Annexes (*b*)	51	53	—	—	—	—	1	—	105
Agricultural Authorities—									
Colleges	2	—	—	—	—	—	—	—	2
Annexes (*b*)	1	—	—	—	—	—	—	—	1
Advanced Education Authorities (*d*)	1	—	4	1	3	—	—	—	9
Annexes (*b*)	2	—	—	—	4	—	—	—	6
Total (*e*) 1981	**412**	**321**	**34**	**591**	**128**	**11**	**14**	**13**	**1,524**

(*a*) Institutions whose major function is TAFE and which have a full-time principal officer. (*b*) Subsidiaries of parent institutions. (*c*) Includes High Schools with TAFE evening classes. (*d*) Colleges offering TAFE activities. (*e*) Includes parent institutions and subsidiaries (annexes) of parent institutions.

TECHNICAL AND FURTHER EDUCATION: STUDENTS WITHIN EACH STREAM OF STUDY, 1981

(*Source: Commonwealth Tertiary Education Commission*)

Stream of study	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Stream 1 Professional	1,221	1,120	209	354	142	42	49	73	3,210
Stream 2 Para-professional	65,961	33,319	12,965	31,200	38,896	4,343	985	3,693	191,362
Stream 3 Trades	61,164	45,574	19,119	9,349	16,778	5,180	1,054	2,096	160,314
Stream 4 Other skilled	105,540	37,697	19,062	23,209	12,510	5,826	2,330	6,714	212,888
Stream 5 Preparatory	45,738	45,912	9,221	33,880	5,651	2,922	1,974	6,168	151,466
Total streams 1 to 5 (*a*)	268,978	158,351	60,576	93,279	68,541	17,695	6,392	18,202	692,014
Stream 6 Adult education (*b*)	21,108	116,050	59,861	44,882	51,126	15,195	5,901	8,822	322,945

(*a*) The sum of the stream of study components does not add to the total as students enrolled in two or more streams have only been counted once in the total. (*b*) Excludes students attending the N.S.W. Board of Adult Education Programs for whom data were not available.

Note: The collection methodology precludes the net number of students in Streams 1 to 5 being added to the net number of students in Stream 6 to derive the net number of students enrolled in all TAFE programs as the resultant figure will contain multiple counting to the extent that students undertaking a program in Streams 1 to 5 may also be enrolled in a Stream 6 program during the reference year.

TECHNICAL AND FURTHER EDUCATION: STUDENTS (STREAMS 1 TO 5) BY MODE OF ATTENDANCE, SEX AND AGE GROUP: AUSTRALIA, 1981

(*Source: Commonwealth Tertiary Education Commission*)

	Mode of attendance								
	Internal		*External*		*Multi-modal*		*Total*		
Age group (years)	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Persons (a)*
16 and under	35,203	26,392	853	884	269	134	36,325	27,410	64,007
17	39,420	18,198	803	1,129	367	265	40,590	19,592	60,274
18	43,218	17,830	1,066	1,293	533	363	44,817	19,486	64,414
19	35,391	14,087	1,171	1,146	519	266	37,081	15,499	52,663
20-24	74,302	39,567	6,507	4,386	1,564	832	82,373	44,785	127,436
25-29	37,653	24,844	6,454	3,252	1,154	541	45,261	28,637	74,099
30-39	43,614	38,059	8,285	4,287	1,259	701	53,158	43,047	96,445
40-49	16,269	19,203	2,920	1,709	363	282	19,552	21,194	40,867
50-64	8,182	12,442	1,273	876	126	133	9,581	13,451	23,102
65 and over	1,799	2,933	253	164	10	9	2,062	3,106	5,186
Not stated (*b*)	45,183	34,429	945	674	128	71	46,256	35,174	83,521
Total	**380,234**	**247,984**	**30,530**	**19,800**	**6,292**	**3,597**	**417,056**	**271,381**	**692,014**

(*a*) Males plus females do not add to persons, because the S.A. Department of Further Education classified the sex of a number of students as *not stated.* (*b*) Includes all N.S.W. Board of Adult Education students (16,992) for whom age data were not provided.

TECHNICAL AND FURTHER EDUCATION: DUTY HOURS OF TEACHING STAFF BY NATURE OF DUTIES, 1981

('000 Hours)

(*Source: Commonwealth Tertiary Education Commission*)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Teaching hours									
Day	2,874.1	2,210.5	988.0	954.1	813.7	275.5	127.4	183.5	8,426.8
Evening	1,317.2	796.0	196.6	128.6	383.4	112.1	24.0	96.2	3,054.2
Total	4,191.3	3,006.6	1,184.6	1,082.7	1,197.2	387.6	151.4	279.7	11,481.0
Non-teaching hours	3,168.5	2,403.2	1,156.8	1,419.2	571.0	359.3	164.7	173.4	9,416.1
Total Duty Hours	**7,359.8**	**5,409.8**	**2,341.4**	**2,501.9**	**1,768.1**	**746.9**	**316.1**	**453.1**	**20,897.1**

TECHNICAL AND FURTHER EDUCATION: FULL-TIME EQUIVALENTS OF NON-TEACHING STAFF BY TYPE OF APPOINTMENT, 1981

(*Source: Commonwealth Tertiary Education Commission*)

Type of appointment	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.(a)*	*A.C.T.*	*Australia*
Full-time	2,740.9	2,178.3	1,232.1	801.6	849.1	298.3	150.4	248.4	8,499.1
Part-time	212.7	414.5	58.1	64.5	159.6	80.2	5.2	56.4	1,051.2
Total F.T.E.(b)	*2,953.6*	*2,592.8*	*1,290.2*	*866.1*	*1,008.7*	*378.5*	*155.6*	*304.8*	*9,550.3*
TOTAL NUMBERS	**2,965**	**3,850**	**1,735**	**948**	**1,646**	**505**	**n.a.**	**315**	**n.a.**

(*a*) Total numbers of *head office* non-teaching staff are not available for N.T. (*b*) F.T.E.—Full-time equivalents.

Colleges of advanced education

Colleges of advanced education normally operate over three terms or two semesters, beginning in early to late February and running to mid-December. Students commencing courses will have completed a full secondary education, or will have demonstrated that they have high probability of successfully completing a course. There are quotas on new enrolments at many of the larger colleges with students able to enrol on a full-time or part-time basis and there are usually provisions for mature-age entry.

The principal purpose of the colleges is to provide tertiary education oriented towards practical training and industrial and social needs. The colleges aim to equip students so that immediately after graduation they may play an effective role in commerce, industry, the public service and the arts. The colleges emphasise undergraduate teaching more than research, although some colleges also offer post-graduate level courses, either at the diploma or master degree level. Most colleges have a commitment to part-time study, and many offer 'sandwich' courses, which provide a period of full-time study with associated periods of full-time employment. Some colleges also offer external courses.

Colleges of advanced education offer a great variety of courses embracing such areas as applied science, teacher education, liberal arts, business and secretarial studies and para-medical studies. The duration of a basic undergraduate course is two to three full-time years, at the conclusion of which an associate diploma, diploma or bachelor degree is awarded.

Some colleges may be large, diversified or multi-vocational institutions, while others are small single purpose institutions. Some of the smaller colleges have been consolidated into larger units by their incorporation into multi-purpose or multi-campus colleges with a single governing body, or by integration with neighbouring universities. When the consolidation has been completed the number of colleges will be reduced from 68 in 1981 to about 40, depending on the form of the amalgamations.

Although teaching in colleges of advanced education is more vocationally oriented and less theoretical or academic than in universities, the system of tuition is similar. Lectures, tutorials and seminars are organised by the institution in the subjects offered. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework.

Halls of residence are provided at some colleges of advanced education, principally those located in country areas. These can accommodate some, but not usually all, students enrolled at those institutions.

NUMBER OF COLLEGES OF ADVANCED EDUCATION, 1977 TO 1982

State or Territory	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*
New South Wales	24	24	24	23	23	17
Victoria	23	23	23	22	22	17
Queensland	10	10	10	10	10	7
South Australia	8	8	6	6	6	3
Western Australia	6	6	6	5	5	2
Tasmania	1	1	1	1	1	1
Australian Capital Territory	1	1	1	1	1	1
Total	**73**	**73**	**71**	**68**	**68**	(*a*)**48**

(*a*) Includes the institutes of advanced education within Wollongong University and the James Cook University of North Queensland. The decrease in the number of colleges of advanced education is the result of amalgamations.

COLLEGES OF ADVANCED EDUCATION: COMMENCING STUDENTS, TOTAL STUDENTS AND STUDENTS COMPLETING COURSES, BY COURSE LEVEL AND FIELD OF STUDY, AUSTRALIA

Field of study	*Master's degree*	*Graduate diploma*	*Bachelor degree*	*Diploma*	*Associate diploma*	*Total*		
						Males	*Females*	*Persons*
COMMENCING STUDENTS, 1982								
Agriculture	—	130	180	80	720	720	380	1,100
Applied sciences	90	1,200	3,640	530	1,120	4,290	2,280	6,570
Art and design	20	580	2,010	960	770	1,690	2,640	4,330
Building, surveying and architecture	—	200	1,150	120	190	1,310	360	1,660
Commercial and business studies	90	2,740	9,490	480	1,480	9,700	4,590	14,290
Engineering and technology	20	310	3,110	60	960	4,310	150	4,460
Liberal studies	20	3,550	5,600	650	1,750	3,880	7,690	11,570
Music	—	100	320	90	120	260	360	620
Para-medical	20	370	1,910	1,450	520	1,030	3,250	4,280
Teacher education	20	1,970	4,780	8,060	70	4,760	10,150	14,910
Miscellaneous	..	..	..	..	..	1,110	1,080	2,190
Total (*a*)—1982	**290**	**11,140**	**32,190**	**12,480**	**7,680**	**33,050**	**32,920**	**65,980**
1981	370	12,110	33,290	13,600	7,190	34,600	33,790	68,390
1980	290	11,280	30,970	14,340	6,880	32,720	32,970	65,690
TOTAL STUDENTS, 1982								
Agriculture	—	220	580	310	1,510	1,820	800	2,620
Applied sciences	480	2,350	10,430	1,220	2,100	10,970	5,610	16,580
Art and design	20	1,020	5,590	2,830	1,500	4,380	6,570	10,950
Building, surveying and architecture	20	480	3,490	600	480	4,110	960	5,080
Commercial and business studies	430	5,300	28,320	1,550	3,620	28,060	11,160	39,220
Engineering and technology	140	640	9,080	200	2,230	11,980	310	12,280
Liberal studies	80	7,120	15,840	1,700	3,440	9,720	18,470	28,190
Music	—	200	1,000	360	200	710	1,040	1,750
Para-medical	140	700	5,690	2,950	1,080	2,820	7,730	10,560
Teacher education	150	3,420	13,040	21,830	170	11,500	27,110	38,620
Miscellaneous	..	..	..	..	..	1,440	1,310	2,750
Total (*a*)—1982	**1,460**	**21,440**	**93,060**	**33,560**	**16,320**	**87,500**	**81,080**	**168,590**
1981	1,140	20,480	87,910	37,910	15,320	85,440	79,630	165,070
1980	1,040	18,400	82,460	43,160	14,400	82,820	78,740	161,560
STUDENTS COMPLETING COURSES, 1981								
Agriculture	—	50	80	120	300	380	170	550
Applied sciences	20	490	1,460	260	260	1,500	980	2,480
Art and design	—	420	980	770	160	1,000	1,330	2,340
Building, surveying and architecture	—	80	480	110	100	650	120	770
Commercial and business studies	40	1,200	2,610	500	460	3,400	1,400	4,800
Engineering and technology	10	150	870	90	270	1,350	30	1,370
Liberal studies	10	1,770	1,990	560	630	1,700	3,260	4,960
Music	—	100	140	110	40	150	250	400
Para-medical	20	270	1,380	760	500	750	2,180	2,930
Teacher education	—	1,840	2,910	8,580	20	4,140	9,210	13,360
Total (*a*)—1981	**90**	**6,370**	**12,900**	**11,860**	**2,720**	**15,010**	**18,930**	**33,940**
1980	80	6,250	11,880	13,610	2,460	15,060	19,220	34,280
1979	80	6,160	10,520	15,120	2,040	14,810	19,100	33,910

(*a*) Course level components do not add to the total because the total includes miscellaneous students who are not proceeding to an award of an institution.

Note. All student numbers have been rounded to the nearest unit of ten.

COLLEGES OF ADVANCED EDUCATION: STUDENTS BY COURSE LEVEL, TYPE OF ENROLMENT, AGE AND SEX, AUSTRALIA, 1977 TO 1982

	1977	*1978*	*1979*	*1980*	*1981*	*1982*
Course level—						
Master's degree	530	670	870	1,040	1,140	1,460
Graduate diploma	11,700	13,910	16,160	18,400	20,480	21,440
Bachelor degree	57,090	67,160	75,350	82,460	87,910	93,060
Diploma	62,490	57,010	50,860	43,160	37,910	33,560
Associate diploma	8,500	11,170	12,430	14,400	15,320	16,320
Miscellaneous (*a*)	..	..	..	2,100	2,320	2,750
Type of enrolment—						
Internal—Full-time	84,890	84,270	82,130	78,230	76,690	77,800
Part-time	44,670	51,410	56,370	62,250	64,910	65,990
External	10,750	14,250	17,170	21,090	23,470	24,800
Age (in years) (*b*)—						
19 and under	49,970	49,500	49,130	47,690	45,100	45,680
20–29	63,770	68,340	70,820	72,380	74,760	75,430
30–59	25,480	31,300	34,950	39,700	43,670	46,370
60 and over	120	160	180	240	440	320
Not stated	970	620	660	1,550	1,100	790
Sex—						
Males	73,820	77,810	79,800	82,820	85,440	87,500
Females	66,500	72,110	75,870	78,740	79,630	81,080
Persons	**140,310**	**149,920**	**155,670**	**161,560**	**165,070**	**168,590**

(*a*) Miscellaneous students were not identifiable prior to 1980. Miscellaneous students are students enrolled in parts of advanced education courses, including single subjects, who are not proceeding to an award.

(*b*) The 1979 components do not add to total persons because some students enrolled in single subjects are included and cannot be separately identified. Total persons are the actual number of students enrolled in approved courses.

Note. All student numbers have been rounded to the nearest unit of ten.

COLLEGES OF ADVANCED EDUCATION: TEACHING AND NON-TEACHING STAFF, AUSTRALIA, 1977 TO 1982

(*Full-time equivalent units, rounded to whole numbers*)

	1977	*1978*	*1979*	*1980*	*1981*	*1982*
Teaching staff—						
Full-time	8,625	8,816	8,864	8,927	8,781	8,605
Part-time	949	1,145	1,312	1,312	1,213	1,223
Total	**9,574**	**9,962**	**10,175**	**10,239**	**9,995**	**9,828**
Non-teaching staff—						
Full-time	9,650	9,980	10,271	10,226	10,241	9,874
Part-time	724	835	905	965	974	995
Total	**10,374**	**10,814**	**11,175**	**11,191**	**11,215**	**10,869**

Universities

The university year in Australia normally runs from late February or early March to mid-December over three terms or two semesters depending on the institution. Normally students commencing courses will have completed a full secondary education, though most universities have some provisions for admitting other persons who can demonstrate that they have a high probability of successfully completing a course. There are quotas on new enrolments in most faculties in Australian universities. Although there are usually provisions for mature-age entry, the majority of students proceed straight from school.

There are nineteen universities in Australia, most of which are located in the capital cities. Universities are autonomous institutions established under Acts of the appropriate parliament and financed mainly by the Commonwealth Government. The basic undergraduate course in most disciplines is three or four full-time years in duration, at the conclusion of which a bachelor degree is awarded. A further one to two years of full-time study is required for a master's degree, and three to five years for a doctoral degree. Universities also offer post-graduate diploma courses in some disciplines. All universities offer full-time and part-time courses, and some offer external studies. In 1982, 60 per cent of students were enrolled in full-time study. As well as providing undergraduate courses, Australian universities are centres of post-graduate study and research. Some universities have institutes or units involved exclusively in research and/or post-graduate teaching. In 1982, 14 per cent of university students were proceeding to higher degrees.

Courses at Australian universities are normally organised in faculties or schools, and students generally elect to study in a number of subject areas, or departments, within a faculty or school. Universities will generally offer some, but not all, of the following courses of study: agriculture, architecture, arts, dentistry, economics, education, engineering, law, medicine, music, science and veterinary science.

The system of tuition in universities is normally by means of lectures, tutorials, seminars and supervised practical work. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework. These are required for many post-graduate degrees.

Most universities have halls of residence on the campus which accommodate some, but not all, of the students currently enrolled. Student organisations on campus provide a wide range of sporting and social facilities for students.

UNIVERSITIES: COMMENCING STUDENTS, TOTAL STUDENTS AND STUDENTS COMPLETING COURSES, BY COURSE LEVEL AND FIELD OF STUDY, AUSTRALIA, 1982

					Total		
Field of study	*Doctorate (a)*	*Master's degree*	*Bachelor degree*	*Non-degree*	*Males*	*Females*	*Persons*
			COMMENCING STUDENTS				
Humanities	270	760	12,490	1,420	5,430	9,510	14,930
Fine arts	10	70	330	120	220	310	530
Social and behavioural sciences	180	580	2,910	500	1,550	2,620	4,170
Law	20	230	2,200	440	1,670	1,220	2,890
Education	160	1,090	1,840	2,260	2,180	3,180	5,360
Economics, commerce, government	100	1,130	6,390	610	5,630	2,590	8,220
Medicine	210	190	2,020	290	1,480	1,240	2,720
Dentistry	—	60	260	10	210	120	330
Natural sciences	550	640	7,810	900	6,250	3,650	9,900
Engineering, technology	120	500	3,390	280	3,960	330	4,290
Architecture, building	20	150	840	120	780	350	1,140
Agriculture, forestry	60	170	680	80	710	280	980
Veterinary science	30	30	310	10	200	170	370
Other or not stated	—	80	30	1,010	540	580	1,120
Total—1982	**1,730**	**5,680**	**41,480**	**8,060**	**30,790**	**26,160**	**56,950**
1981	1,260	5,390	42,550	8,590	31,650	26,140	57,790
1980	1,050	4,530	42,780	8,170	31,210	25,330	56,540
			TOTAL STUDENTS				
Humanities	1,070	2,080	38,460	2,330	15,890	28,040	43,940
Fine arts	80	210	900	220	570	840	1,410
Social and behavioural sciences	670	1,700	8,650	750	4,520	7,250	11,770
Law	50	680	8,910	730	6,400	3,980	10,380
Education	490	3,490	5,800	2,940	5,360	7,370	12,730
Economics, commerce, government	420	2,760	18,770	1,120	16,400	6,650	23,060
Medicine	790	480	10,200	460	7,050	4,870	11,920
Dentistry	30	190	1,340	10	1,150	420	1,560
Natural sciences	2,360	1,770	21,770	1,380	17,610	9,680	27,290
Engineering, technology	590	1,820	10,720	390	12,680	840	13,520
Architecture, building	100	460	3,120	250	2,940	990	3,930
Agriculture, forestry	300	510	2,030	120	2,220	750	2,970
Veterinary science	90	100	1,230	10	840	600	1,440
Other or not stated	10	100	90	1,310	740	780	1,510
Total—1982	**7,040**	**16,340**	**131,990**	**12,030**	**94,350**	**73,050**	**167,400**
1981	6,380	15,440	132,370	12,420	95,410	71,200	166,610
1980	6,150	14,420	130,660	11,920	94,950	68,210	163,160

UNIVERSITIES: COMMENCING STUDENTS, TOTAL STUDENTS AND STUDENTS COMPLETING COURSES, BY COURSE LEVEL AND FIELD OF STUDY, AUSTRALIA 1982—*continued*

Field of study	*Doctorate (a)*	*Master's degree*	*Bachelor degree*	*Non-degree*	*Total*		
					Males	*Females*	*Persons*
			STUDENTS COMPLETING COURSES				
Humanities	100	360	7,110	80	3,010	4,640	7,650
Fine arts	—	10	160	—	80	100	180
Social and behavioural sciences	70	160	1,440	280	630	1,310	1,940
Law	10	50	1,590	100	1,190	560	1,750
Education	30	430	1,620	1,940	1,730	2,280	4,010
Economics, commerce, government	60	440	3,310	140	2,850	1,090	3,940
Medicine	110	50	1,970	100	1,320	900	2,220
Dentistry	—	40	300	10	270	70	340
Natural sciences	380	310	5,110	220	3,980	2,030	6,020
Engineering, technology	110	240	1,430	20	1,740	50	1,800
Architecture, building	10	60	470	40	450	140	590
Agriculture, forestry	50	80	400	30	450	120	570
Veterinary science	10	20	290	10	210	120	330
Other or not stated	30	—	10	—	30	10	40
Total—1982	**960**	**2,240**	**25,210**	**2,960**	**17,940**	**13,430**	**31,370**
1981	940	2,260	25,480	3,110	18,460	13,340	31,790
1980	890	2,090	25,860	3,290	19,020	13,100	32,130

(a) Comprises Ph.D.s and doctorates other than Ph.D.s.
Note. All student numbers have been rounded to the nearest unit of ten.

UNIVERSITIES: STUDENTS BY COURSE LEVEL, TYPE OF ENROLMENT, AGE AND SEX, AUSTRALIA, 1977 TO 1982

	1977	*1978*	*1979*	*1980*	*1981*	*1982*
Course level—						
Doctorate(*a*)	5,500	5,800	5,920	6,150	6,380	7,040
Master's degree	12,940	13,370	13,980	14,420	15,440	16,340
Bachelor degree	127,360	128,870	129,220	130,660	132,370	131,990
Non-degree	12,620	12,000	11,690	11,920	12,420	12,030
Type of enrolment—						
Full-time	102,900	101,350	99,080	98,990	99,920	100,360
Part-time—internal	45,830	47,190	48,920	50,330	51,460	51,900
external	9,680	11,490	12,810	13,840	15,230	15,150
Age (in years)—						
19 and under	50,580	48,960	48,280	48,370	48,090	47,590
20-29	77,870	77,520	76,500	76,810	77,510	77,110
30-59	29,600	32,480	34,510	37,110	40,020	41,580
60 and over	360	460	540	660	840	950
Not stated	—	620	980	200	160	170
Sex—						
Males	96,940	96,220	95,250	94,950	95,410	94,350
Females	61,470	63,820	65,560	68,210	71,200	73,050
Persons	**158,410**	**160,040**	**160,810**	**163,160**	**166,610**	**167,400**

(*a*) Comprises Ph.D.s and doctorates other than Ph.D.s.
Note. All student numbers have been rounded to the nearest unit of ten.

UNIVERSITIES: STAFF BY TYPE OF EMPLOYMENT, AUSTRALIA, 1977 TO 1982

(*Full-time equivalent units*)

	1977	*1978*	*1979*	*1980*	*1981*	*1982*
Teaching and research staff						
Full-time	10,622	10,842	10,790	10,722	10,692	10,499
Part-time	1,175	1,154	1,175	1,173	1,269	1,108
Total	**11,797**	**11,996**	**11,965**	**11,895**	**11,962**	**11,607**
Research only staff						
Full-time	1,667	1,769	1,819	1,917	2,161	2,303
Part-time	54	69	54	90	83	83
Total	**1,720**	**1,838**	**1,873**	**2,007**	**2,244**	**2,386**
General staff						
Full-time	21,537	21,813	21,868	21,967	22,040	21,643
Part-time	908	958	1,023	1,114	1,116	1,226
Total	**22,444**	**22,771**	**22,890**	**23,081**	**23,156**	**22,869**
All staff						
Full-time	33,826	34,424	34,478	34,605	34,894	34,445
Part-time	2,136	2,181	2,251	2,377	2,468	2,417
Total	**35,962**	**36,605**	**36,729**	**36,982**	**37,362**	**36,862**

Programs which span the educational sectors

Aboriginal education

The need for special educational provisions for Aboriginal children and adults is recognised by the Commonwealth Government and currently assistance is made available for a wide variety of special measures at the early childhood, school and post-school levels. These include bilingual education programs, the employment of Aboriginal teacher aides, special enclave arrangements in tertiary institutions, TAFE programs designed to meet Aboriginal needs and support for Aboriginal independent schools. Furthermore, three schemes of student assistance provide financial support to individual students to enable them to participate in secondary and post-school education.

Since 1977, the all-Aboriginal and Torres Strait Islander *National Aboriginal Education Committee* (NAEC) has provided advice to the Commonwealth Government on the educational needs of Aboriginal people. Its role has recently been enhanced to that of principal adviser to the Minister for Education and Youth Affairs on policies in Aboriginal education. A major priority enunciated by the NAEC is teacher education and a target of 1,000 fully trained Aboriginal teachers by 1990 has been set. To this end a special category of awards is to be introduced in 1984 to encourage mature age Aboriginal students to undertake studies leading to formal teaching qualifications. Funds have also been specifically earmarked by the Commonwealth Schools Commission in 1984 for capital facilities in schools serving predominantly Aboriginal communities.

Migrant and multicultural education

Acceptance by both Commonwealth and State Governments of the concept of Australia as a multicultural society has led to the expansion of the *English as a Second Language Program*, formerly the *Migrant Education Program*, which is aimed specifically at improving the English language competence of children from non-English speaking backgrounds, many of whom are Australian-born. A complementary Program in Multicultural Education aims to promote in all students an appreciation of the multicultural nature of Australian society through such projects as teaching community languages, intercultural studies and other activities aimed at encouraging respect for different cultural backgrounds.

Under the *Adult Migrant Education Program*, which is co-ordinated by the Commonwealth Department of Immigration and Ethnic Affairs, co-ordinated settlement programs give new immigrants orientation on housing, education, employment and welfare, together with formal English instruction.

Teacher education

Colleges of advanced education educate a majority of teachers, but a substantial number of secondary teachers and some primary teachers attend a university. In addition, there are a few non-government teachers colleges, operated mainly by religious denominations, which educate some of the teachers for non-government schools.

A significant reduction in enrolments in both primary and secondary teacher education courses has occurred over the last five years. Reduced teacher education enrolments has been one reason for the amalgamation of some smaller colleges of advanced education into multi-campus institutions with capacity for greater diversification.

The majority of pre-school and primary teachers undertake pre-service courses lasting three years, while most secondary teachers undertake four-year courses. In-service training opportunities are available in the form of study leave or assistance to enable teachers to upgrade their formal qualifications and also through less formal workshops, seminars or conferences.

The Commonwealth Government believes that insufficient attention has been given to defining and co-ordinating the responsibilities of the different bodies involved in the professional development of teachers. In 1984 the Commonwealth Tertiary Education Commission and the Commonwealth Schools Commission are to consult and prepare advice on the direction, effectiveness and co-ordination of Commonwealth policies on the allocation of resources for improved teacher education.

Expenditure on education

The aim of this section is to provide information on the extent and direction of both government and private expenditure on education in recent years. The figures have been compiled in accordance with national accounting concepts. For explanation of these concepts, reference should be made to *Australian National Accounts: Concepts, Sources and Methods* (5216.0), and also to *Commonwealth Government Finance, Australia* (5502.0), and *State and Local Government Finance, Australia* (5504.0), from which figures included in this section have also been taken.

The emphasis given in this section to the outlays of the public sector reflects in part the relative importance of that sector in the provision of education services, but it is also a reflection of the lack of detailed information relating to educational activities in the private sector. Information is given, however, to show the order of magnitude of private sector spending, and also to show aggregate supply of education services and facilities. For more information on the extent and direction of both government and private expenditure on education, reference should be made to *Expenditure on Education Australia* (5510.0)

AUSTRALIA: EXPENDITURE ON EDUCATION

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
			— $m —			
Public sector—						
Final consumption expenditure	4,115	4,653	5,062	5,673	6,550	7,537
Expenditure on new fixed assets	641	717	731	659	651	650
Final expenditure(1)	*4,756*	*5,370*	*5,793*	*6,332*	*7,201*	*8,187*
Transfer payments and expenditure on existing fixed assets (net)	375	392	391	374	385	406
Outlay	*5,131*	*5,762*	*6,185*	*6,704*	*7,585*	*8,593*
Private sector—						
Final consumption expenditure	243	255	272	293	311	337
Expenditure on new fixed assets	68	89	110	101	137	160
Final expenditure(2)	*311*	*344*	*382*	*394*	*448*	*497*
Total expenditure on education (1) + (2)	**5,067**	**5,714**	**6,175**	**6,726**	**7,649**	**8,684**
Gross domestic product	**83,165**	**90,251**	**102,225**	**114,487**	**130,563**	**147,576**
			— per cent —			
Expenditure on education as percentage of gross domestic product—						
Final consumption expenditure—						
Public	4.9	5.2	5.0	5.0	5.0	5.1
Private	0.3	0.3	0.3	0.3	0.2	0.2
Expenditure on new fixed assets—						
Public	0.8	0.8	0.7	0.6	0.5	0.4
Private	0.1	0.1	0.1	0.1	0.1	0.1
Total expenditure	**6.1**	**6.3**	**6.1**	**5.9**	**5.9**	**5.8**

Total expenditure on education

Total expenditure on education can be measured by adding together the final expenditures of the public and private sectors.

The figure derived for total expenditure on education can be regarded as a measure of the aggregate supply of education services and facilities and can therefore be related to the supply of goods and services available from domestic production (i.e. gross domestic product). Final consumption expenditure and capital expenditure on education, by sector, can also be related to gross domestic product. These relationships are shown in the table above.

Private sector

Final expenditure on education by the private sector consists of private final consumption expenditure on education services, and expenditure on new fixed assets—mainly by private non-profit organisations and financed in part by grants from public authorities for private capital purposes. Private final consumption expenditure on education services is an estimate of fees paid by persons to government schools (mainly technical and agricultural colleges), fees and gifts to universities and school fees (other than boarding fees) paid to non-government schools, business colleges, etc. Expenditure on such items as school books, uniforms, etc., and expenditure by parents associations on school equipment is not included, being treated in the Australian National Accounts as private final consumption expenditure on other goods and services (such as clothing, books, household durables, etc.). Private expenditure on new fixed assets is estimated from statistics of the value of work done on new building and major additions to buildings of private educational institutions.

Public sector

The statistics presented here for the public sector relate to those outlays which have been identified as being primarily designed to serve the purposes of 'education', broadly as defined in the United Nations System of National Accounts. Included, therefore, are outlays on administration and regulation of school systems and institutions of higher learning and educational research; on provision, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the handicapped, adult education facilities, pre-school centres, etc.; on scholarships, etc.; and on subsidiary services such as transportation of school children and fare concessions. Expenditure on school medical and dental services and provision of free milk for school-children are not included, as these are regarded as primarily serving the purpose of health.

Northern Territory government authorities

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue powers broadly approximating those of a State. However, not all State type functions were fully transferred to the Northern Territory Government on that date. Responsibility for education services was transferred to the Northern Territory Government on 1 July 1979 and Northern Territory outlay is included with the statistics for State and local governments from 1979–80. For earlier years outlay on education in the Northern Territory is included in outlay of the Commonwealth Government.

All public authorities

The outlay on education by all public authorities consists of the final expenditure on goods and services of the Commonwealth and State authorities and transfers by these authorities to the private sector. These figures are shown in the following table, and are related to the total outlay (on all functions) by all public authorities in order to give an indication of the share of government resources devoted to education.

ALL PUBLIC AUTHORITIES: OUTLAY ON EDUCATION

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
			–$ million–			
Commonwealth authorities—						
Final consumption expenditure	234.6	256.3	286.9	250.2	279.6	326.0
Personal benefit payments	194.0	212.6	224.9	225.2	244.4	261.2
Transfers overseas	–	–	–	–	0.2	–
Grants for private capital purposes	3.5	4.2	4.0	3.1	3.3	3.5
Expenditure on new fixed assets	62.2	54.2	50.8	33.2	33.5	23.8
Expenditure on existing fixed assets (net)	-0.5	—	—	0.1	0.1	–
Grants to States—						
Current	1,390.8	1,517.8	1,595.3	1,774.7	2,050.8	2,368.6
Capital	327.8	343.1	363.7	325.1	321.2	369.0
Total Commonwealth	*2,212.3*	*2,388.3*	*2,525.6*	*2,611.6*	*2,933.1*	*3,352.1*
State authorities—						
Final consumption expenditure	3,872.0	4,387.8	4,765.6	5,411.8	6,258.4	7,196.4
Personal benefit payments	123.4	120.2	103.5	97.4	96.2	94.6
Grants for private capital purposes	25.4	32.2	40.4	30.1	34.3	43.1
Expenditure on new fixed assets	574.2	659.9	677.8	623.8	615.4	624.9
Expenditure on existing fixed assets (net)	29.0	21.3	17.8	17.2	5.7	3.6
Grants to local government authorities	13.3	10.8	10.1	10.7	11.8	13.6
Other(*a*)	0.6	0.6	0.6	0.7	0.7	0.1
Total State	*4,638.0*	*5,232.9*	*5,615.9*	*6,191.8*	*7,022.6*	*7,976.0*
Less Grants from the Commonwealth Government for educational purposes	1,718.5	1,860.9	1,956.0	2,100.3	2,372.3	2,737.6
Outlay financed from States' own resources and from non-specific Commonwealth Government grants	2,919.5	3,372.0	3,659.9	4,091.5	4,650.3	5,238.4
Local authorities—						
Final consumption expenditure	8.5	8.5	9.5	10.6	12.4	14.3
Expenditure on new fixed assets	4.2	2.8	2.8	2.4	2.0	1.7
Expenditure on existing fixed assets (net)	—	0.8	0.5	0.4	0.2	–
Total local	*12.6*	*12.1*	*12.8*	*13.4*	*14.6*	*16.0*
Less Grants from State authorities for education purposes	13.3	10.8	10.1	10.7	11.8	13.6
Outlay financed from local authorities own resources	-0.7	1.4	2.7	2.7	2.8	2.9
Total outlay on education	**5,131.2**	**5,761.7**	**6,185.3**	**6,705.8**	**7,586.2**	**8,593.0**
Total outlay on all purposes	**31,788.6**	**35,790.3**	**38,761.8**	**43,229.4**	**49,888.3**	**57,265.4**
			–per cent–			
Outlay on education as percentage of total outlay	16.1	16.1	16.0	15.5	15.2	15.0

(*a*) Mainly subsidies for teacher housing.

Commonwealth authorities

Details of outlay on education by authorities of the Commonwealth Government are given in the following table.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION

	1979–80	*1980–81*	*1981–82*
		-$ million-	
General administration, regulation and research—			
Department of Education—			
Salaries, etc., n.e.c.	21.2	24.2	28.1
Administration expenses, n.e.c.	8.5	8.1	9.2
Tertiary Education Commission	2.2	2.7	2.8
Building and works, office equipment, etc.	0.1	0.2	0.1
Grants to the States—			
Research and development	0.9	1.0	0.8
Other	–1.0	–7.7	–11.4
Total general administration, etc.	*31.9*	*28.4*	*29.6*
Transportation of students—			
School bus service—			
Australian Capital Territory	2.1	2.6	3.6
Northern Territory	—	—	—
Total transportation	*2.1*	*2.6*	*3.6*
Primary and secondary education—			
Schools Commission	3.2	3.6	3.9
Education services—			
Australian Capital Territory	66.9	74.9	84.9
Northern Territory	–	–	–
School broadcasts	2.3	2.4	2.9
Student assistance	10.5	12.7	15.6
Child migrant education program	0.7	4.5	4.7
Assistance to isolated children	12.2	14.5	17.8
Grants to non-government schools—			
Australian Capital Territory	14.4	17.2	17.9
Northern Territory	–	–	–
Grants to the States—			
Non-government schools—Recurrent grants	263.5	327.8	421.1
Non-government schools—Capital grants	29.8	34.7	48.2
Government schools—Recurrent grants	262.8	302.4	348.6
Government schools—Capital grants	115.1	103.8	116.5
Education program for unemployed youth	3.5	4.1	4.2
Child migrant education(*a*)	2.7	0.1	–
Schools—joint programs	25.4	28.6	39.7
Grants to the Northern Territory—			
Recurrent grants	3.9	5.0	6.4
Capital grants	1.7	2.3	2.6
Other	2.5	12.5	29.5
Total primary and secondary	*821.1*	*951.1*	*1,164.5*
Vocational Training—			
Technical and Further Education in the A.C.T.	21.3	22.4	22.2
Darwin Community College	–	–	–
Student assistance	30.4	29.0	36.3
Grants to the States—TAFE—			
Apprentice training	–	–	–
Recurrent grants	62.8	84.2	84.3
Other Capital grants	78.8	97.1	108.7
Grants to the Northern Territory—			
Recurrent grants	3.7	4.0	4.4
Capital grants	2.5	2.3	5.1
Other	0.1	0.1	–
Total vocational training	*199.7*	*239.1*	*261.0*

For footnote *see* end of table.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION—*continued*

	1979–80	*1980–81*	*1981–82*
		–$ million–	
University education—			
Australian Universities Commission	–	–	–
Australian National University—			
Student assistance	2.5	2.4	2.1
Other	81.2	93.0	115.8
Student assistance—			
Undergraduate	74.8	68.4	67.1
Postgraduate	8.5	8.8	9.6
Grants to Australian National University residential colleges	0.1	0.1	0.2
School of Public Health and Tropical Medicine (Sydney University)	2.9	3.1	3.4
Grants to the States—Universities	704.9	774.2	893.4
Other	–	0.2	–
Total university	*875.0*	*950.2*	*1,091.6*
Other higher education—			
Canberra College of Advanced Education	17.3	19.0	19.3
Canberra School of Music	1.1	1.4	1.9
Australian Film and Television School	4.0	4.5	5.3
Student assistance	51.7	66.1	66.1
Commonwealth Teaching Service scholarships	0.6	0.3	–
Grants to the States	497.2	547.4	578.8
Grants to the Northern Territory	–	0.2	0.2
Other	11.3	12.8	8.2
Total other higher education	*583.2*	*651.7*	*679.8*
Other education programs—			
Aboriginal education—			
Study grants	7.4	10.2	11.8
Secondary grants	14.0	17.4	19.2
Grants to private non-profit organisations	3.9	4.4	5.1
Grants to the States	6.2	7.0	7.6
Other	0.2	0.3	0.4
Soldiers' children education scheme	2.6	2.4	2.3
Migrant education programs	23.5	29.0	33.1
Pre-school programs—			
Grants to States and local authorities	32.7	30.8	32.7
Grants to the Northern Territory	0.3	0.3	0.3
Other	3.2	3.6	3.5
Adult education programs	4.2	4.4	4.5
Other	0.3	0.1	1.5
Total other programs	*98.6*	*109.9*	*122.0*
Total outlay on education	**2,611.6**	**2,933.1**	**3,352.1**
of which—			
Current outlay	2,250.1	2,574.9	2,955.8
Capital outlay	361.5	358.1	396.3
Total outlay on all purposes	**33,218.9**	**37,806.6**	**43,194.7**
		–per cent–	
Outlay on education as a percentage of total outlay	7.9	7.8	7.8

(*a*) From January 1976 grants to the States for child migrant education under the Schools Commission program are included under various other grants to the States for schools.

As may be seen from the table, Commonwealth Government outlays are directed largely towards financing outlays on education by the States and the private sector. Direct expenditure by the Commonwealth Government relates mainly to the costs of administering its support programs and its own educational research activities, the provision of education services in the internal territories, expenditures of statutory bodies (i.e. the Australian National University, the Canberra College of Advanced Education, and the Australian Broadcasting Commission), expenditure on the education of Aboriginals by the Northern Territory administration, and the costs of the child migrant education program.

BIBLIOGRAPHY

ABS Publications

For the most recent statistics available on subjects dealt with in this chapter, reference should be made to the series of publications on social statistics issued by the ABS. These publications comprise:

Colleges of Advanced Education, Australia (4206.0)
University Statistics, Australia (4208.0)
National Schools Collection, Government Schools, Australia (4215.0)
Non-government Schools, Australia (4216.0)
Reasons for completion or non-completion of secondary education, Australia 1982 (4217.0)

Financial aspects are dealt with in the annual publications—

Commonwealth Government Finance, Australia (5502.0)
State and Local Government Finance, Australia (5504.0)
Expenditure on Education, Australia (5510.0)

Other Publications

The annual reports of the respective State education departments provide detailed statistical and other information about particular States.

Publications produced regularly by the Department of Education and Youth Affairs include—
Australian Education Directory
Directory of Higher Education Courses
Directory of Research and Researchers in Australia
Education in Australia
Major Trends and Developments in Australian Education
Education News (a departmental journal)
Hemisphere (a bi-monthly Asian-Australian magazine)

Other publications and research reports are listed in the departmental annual report.

CHAPTER 13

AGRICULTURAL INDUSTRIES

This chapter is divided into the following major parts:—Introduction; Sources of statistics and definitions of units; Structural statistics (provides data on the legal arrangements, size and industry class of the business organisations operating within the agricultural sector); Financial statistics (provides estimates of the financial performance of business organisations engaged in agricultural activities); Value of agricultural commodities produced and index of values at constant prices; Apparent consumption of foodstuffs and nutrients; Land utilisation; Crop statistics; Livestock statistics; Livestock products; Agricultural improvements and employment.

Introduction

The development of Australian agricultural industries has been determined by interacting factors such as profitable markets, the opening up of new land (including the development of transport facilities) and technical and scientific achievements. Subsistence farming, recurring gluts, low prices and losses to farmers were gradually overcome by the development of an export trade. Profitable overseas markets for merino wool and wheat, and the introduction of storage and refrigerated shipping for the dairying and meat industry combined to make the agricultural sector Australia's main export earner. Until the late 1950's, agricultural products comprised more than 80 per cent of the value of Australia's exports. Since then, the proportion of Australia's exports coming from the agricultural sector has declined markedly.

However, this decline in importance has been due not to a decline in agricultural activity but rather to an increase in the quantity and values of the exports of the mining and manufacturing sectors. In fact, the agricultural sector experienced an increase in total output over that period. One interesting aspect of this increase in output is that it was accompanied by a large reduction in the size of the agricultural labour force, implying a large growth in productivity within the sector.

Sources of statistics and definitions of units

Agricultural Census

The major source of the statistics in this chapter is the Agricultural Census conducted at 31 March each year. This collects a wide range of information from agricultural establishments with agricultural activity covering the physical aspects of agriculture such as area and production of crops, fertilisers used, number of livestock disposed of, etc. In conjunction with the Census, certain supplementary collections are conducted in some States where this has proved expedient, e.g. where the harvesting of certain crops has not been completed by 31 March (apples, potatoes, etc.), special returns covering the crops concerned are collected after the completion of the harvest.

The ABS excludes from the Census those establishments which make only a small contribution to overall agricultural production. Thus, establishments with agricultural activity have been included in the 1982–83 Census if they had, or were expected to have, an estimated value of agricultural operations of $2,500 or more. In previous years the value cut off was applied at the enterprise level -for 1981–82 the value was $2,500 and for earlier years, $1,500.

While these changes have resulted in some changes in the counts of numbers of establishments appearing in publications, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small scale operations may be affected to a greater extent.

Details of the method used in the calculation of the estimated value of agricultural operations are contained in the publication *Agricultural Industries: Structure of Operating Units, Australia* (7102.0). Prior to 1975–76, all agricultural establishments with areas of one hectare or more were included. In addition, establishments of less than one hectare tended to be included where significant agricultural activity was undertaken, e.g. poultry farms, commercial market gardens and nurseries.

Integrated Agricultural Register

The Integrated Agricultural Register contained information about the area, type, legal status, level of activity and location of units engaged in agriculture and was originally compiled by adding data in a special census of economic units conducted in 1974 to existing data relating to physical characteristics of agricultural establishments. Details of agricultural units for 1982–83 will be derived from the Intergrated Register Information System (IRIS) which has absorbed the IAR. Details of the structure of economic units engaged in agriculture, in hierarchical order, are:

- *Enterprise* (the second level of economic unit). The enterprise is that unit comprising all operations in Australia of a single operating legal entity. (The term 'single legal entity' means a sole trader, partnership, company, trust, co-operative or estate in the private sector, or a department, local government authority or statutory authority in the government sector). For the agricultural sector, a 'multi-State enterprise' is an enterprise which belongs to an enterprise group which undertakes agricultural activities in more than one State.
- *Establishment* (the smallest economic unit). The establishment covers all operations carried out by one enterprise at a single physical location.

Agricultural Finance Survey (AFS)

The triennial AFS collects detailed financial statistics from a sample of agricultural enterprises. The main purpose of the survey is to produce estimates of the financial performance of the agricultural sector and its component industries.

Other Statistical Collections

The ABS conducts a number of other collections to obtain agricultural statistics. These include collections from wool brokers and dealers, livestock slaughterers and other organisations involved in the marketing and selling of agricultural commodities.

Structural statistics

The following tables provide information relating to the structure of operating units during 1981-82. Although the definitions of the operating units have been provided above, the following terminology is also used:

- *Industry*. As set out in the *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0). These publications provide details of the methodology used in determining the industry class of an economic unit.
- *Estimated Value of Agricultural Operations* (EVAO). This is determined by valuing the physical crop and livestock information collected in the Agricultural Census.

A further explanation of this terminology and more detailed statistics are given in the publication *Agricultural Industries: Structure of Operating Units, Australia* (7102.0).

NUMBER OF UNITS BY TYPE OF UNIT, 1981–82(a)

Unit	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.(b)*
Agricultural establishments	52,695	46,167	38,820	19,170	16.613	5,664	174,166
Agricultural enterprises	50,872	44,873	32,342	18,699	15,354	5,439	168,309

(*a*) Not comparable with figures for previous periods. Prior to 1981–82 an enterprise was not tabulated if the estimated value derived was less than $1,500: for 1981–82 this estimated value was increased to exclude enterprises below $2,500. For direct comparisons with previous periods refer to Explanatory Notes to the publication *Agricultural Industries: Structure of Operating Units, Australia*, 1981–82 (7102.0). (*b*) Includes enterprises in the Northern Territory, Australian Capital Territory and multi-State enterprises.

AGRICULTURAL ENTERPRISES, INDUSTRY AND ESTIMATED VALUE OF OPERATIONS: 1981–82

ASIC	*Industry of enterprise*	*Estimated value of operations ($'000)*											
Code	*Description*	*3–9*	*10–19*	*20–29*	*30–39*	*40–49*	*50–59*	*60–74*	*75–99*	*100–149*	*150–199*	*200 and more*	*Total enterprises*
0124	Poultry for meat	46	61	98	81	78	66	71	62	45	17	34	659
0125	Poultry for eggs	80	61	59	41	38	41	51	98	133	116	305	1,023
0134	Grapes	680	807	823	758	513	356	283	216	108	33	30	4,607
0135	Plantation fruit	270	447	387	255	197	148	103	94	78	30	43	2,052
0136	Orchard and other fruit .	1,369	1,058	911	675	533	402	442	460	469	160	266	6,745
0143	Potatoes	76	116	120	123	133	140	165	225	244	117	168	1,627
0144	Vegetables (except potatoes)	849	932	588	404	304	190	252	309	344	189	384	4,745
0181	Cereal grains (incl. oilseeds n.e.c.)	965	1,120	1,055	1,062	1,173	1,068	1,606	2,286	2,787	1,517	2,141	16,780
0182	Sheep-cereal grains . . .	446	1,040	1,547	1,961	1,998	2,011	2,780	3,568	3,847	1,739	2,003	22,940
0183	Meat cattle-cereal grains .	488	693	611	535	478	383	475	587	551	230	329	5,360
0184	Sheep-meat cattle . . .	1,398	1,821	1,642	1,431	1,186	916	1,047	1,187	1,109	491	637	12,865
0185	Sheep	3,400	3,024	2,497	2,096	1,649	1,261	1,407	1,545	1,419	542	570	19,410
0186	Meat cattle	11,814	7,592	3,644	2,185	1,450	940	934	985	931	441	731	31,647
0187	Milk cattle	758	1,672	2,872	3,931	3,448	2,339	1,964	1,404	818	162	123	19,491
0188	Pigs	466	470	331	249	202	180	191	230	265	121	185	2,890
0191	Sugar cane	38	75	122	231	365	522	903	1,245	1,389	601	662	6,153
0192	Peanuts	9	29	23	43	44	48	44	80	73	39	43	475
0193	Tobacco	2	6	27	44	94	114	186	162	113	26	21	795
0194	Cotton	5	1	2	2	4	2	8	14	35	49	154	276
0195	Nurseries	337	257	162	150	126	120	105	88	122	66	152	1,685
0196	Agriculture n.e.c. . . .	2,457	1,452	688	418	280	199	162	159	132	59	78	6,084
	Total (ASIC Code 01) . . .	**25,953**	**22,734**	**18,209**	**16,675**	**14,293**	**11,446**	**13,179**	**15,004**	**15,012**	**6,745**	**9,059**	**168,309**

AGRICULTURAL ENTERPRISES, INDUSTRY, LEGAL STATUS AND ESTIMATED VALUE OF OPERATIONS: 1981–82

		Legal status						
ASIC Code	*Industry of enterprise* *Description*	*Sole operator*	*Family partnership*	*Other partnership*	*Private incorporated company*	*Public incorporated company*	*Other(a)*	*Total enterprises*
0124	Poultry for meat	132	415	29	71	1	11	659
0125	Poultry for eggs	223	607	47	121	5	20	1,023
0134	Grapes	1,202	3,080	134	147	5	39	4,607
0135	Plantation fruit	675	1,250	61	46	2	18	2,052
0136	Orchard and other fruit . . .	1,961	4,163	209	346	3	63	6,745
0143	Potatoes	463	1,040	47	64	—	13	1,627
0144	Vegetables (except potatoes) .	1,389	3,008	117	193	2	36	4,745
0181	Cereal grains (incl. oilseeds n.e.c.)	3,686	11,222	569	898	20	385	16,780
0182	Sheep-cereal grains	4,246	16,262	728	1,188	14	502	22,940
0183	Meat cattle-cereal grains . . .	1,393	3,329	201	325	8	104	5,360
0184	Sheep-meat cattle	3,775	7,176	704	861	15	334	12,865
0185	Sheep	5,947	11,043	859	1,048	13	500	19,410
0186	Meat cattle	12,567	15,270	1,230	1,750	49	781	31,647
0187	Milk cattle	4,952	13,170	425	589	11	344	19,491
0188	Pigs	811	1,820	101	124	6	28	2,890
0191	Sugar cane	1,269	4,444	132	187	3	118	6,153
0192	Peanuts	114	336	4	14	1	6	475
0193	Tobacco	153	571	34	21	2	14	795
0194	Cotton	39	146	21	58	2	10	276
0195	Nurseries	460	821	151	227	1	25	1,685
0196	Agriculture n.e.c.	2,685	2,681	315	323	9	71	6,084
	Total (ASIC Code 01)	**48,142**	**101,854**	**6,118**	**8,601**	**172**	**3,422**	**168,309**
	Estimated value of operations ($'000)							
	3 9	12,144	11,602	943	734	21	509	25,953
	10 19	9,767	11,095	646	721	15	490	22,734
	20 29	6,704	10,101	497	524	9	374	18,209
	30 39	5,096	10,295	473	478	10	324	16,676
	40 49	3,648	9,448	394	510	10	284	14,294
	50 59	2,659	7,715	403	454	9	203	11,443
	60 74	2,510	9,240	519	651	16	245	13,181
	75 99	2,409	10,791	622	919	12	253	15,006
	100 149	1,834	10,865	712	1,251	21	327	15,010
	150 199	687	4,835	334	722	6	161	6,745
	200 and more	684	5,867	575	1,637	43	252	9,058
	Total all size groups .	**48,142**	**101,854**	**6,118**	**8,601**	**172**	**3,422**	**168,309**

(*a*) Includes co-operative societies trusts and estates.

AGRICULTURAL ESTABLISHMENTS OPERATED BY AGRICULTURAL AND NON-AGRICULTURAL ENTERPRISES BY INDUSTRY OF ESTABLISHMENT: 1981–82

ASIC Code	*Industry of establishment*	*Operated by agricultural enterprises*	*Operated by non-agricultural enterprises*
0124	Poultry for meat	668	16
0125	Poultry for eggs	1,042	11
0134	Grapes	4,633	141
0135	Plantation fruit	2,060	23
0136	Orchard and other fruit	6,798	137
0143	Potatoes	1,636	17
0144	Vegetables (except potatoes)	4,781	56
0181	Cereal grains (incl. oilseeds n.e.c.)	17,092	185
0182	Sheep-cereal grains	23,297	148
0183	Meat cattle-cereal grains	5,433	71
0184	Sheep-meat cattle	13,021	250
0185	Sheep	19,848	286
0186	Meat cattle	32,768	1,152
0187	Milk cattle	19,652	131
0188	Pigs	2,937	64
0191	Sugar cane	6,249	37
0192	Peanuts	482	4
0193	Tobacco	796	1
0194	Cotton	283	3
0195	Nurseries	1,707	63
0196	Agriculture n.e.c.	6,288	199
	Total (ASIC Code 01)	**171,471**	**2,995**

AGRICULTURAL ESTABLISHMENTS OPERATED BY AGRICULTURAL AND NON-AGRICULTURAL ENTERPRISES BY INDUSTRY OF ENTERPRISE AND INDUSTRY OF ESTABLISHMENT: 1981–82

		Industry of establishment														
						Cereal grains-sheep-cattle and pigs (ASIC Code 018)										
ASIC Code	*Industry of enterprise — Description*	*Poultry (012)*	*Fruit (013)*	*Vege-tables (014)*	*Total (012)-(014)*	*Cereal grains, (incl. oilseeds (0181)*	*Sheep, cereal grains (0182)*	*Meat cattle-cereal grains (0183)*	*Sheep-meat cattle (0184)*	*Sheep (0185)*	*Meat cattle (0186)*	*Milk cattle (0187)*	*Pigs (0188)*	*Total (018)*	*Other agri-culture (019)*	*Total estab-lishments (01)*
A	Agriculture, Forestry, Fishing and Hunting															
01	Agriculture															
012	Poultry	1,706	3	1	1,710	5	5	–	–	2	10	2	1	25	8	1,743
013	Fruit	–	13,427	8	13,435	4	4	–	–	4	25	4	–	41	12	13,488
014	Vegetables	–	6	6,392	6,398	2	–	2	2	2	21	4	1	34	17	6,449
	Total (ASIC Codes 012-014)	*1,706*	*13,436*	*6,401*	*21,543*	*11*	*9*	*2*	*2*	*8*	*56*	*10*	*2*	*100*	*37*	*21,680*
018	Cereal grains, sheep, cattle and pigs															
0181	Cereal grains (incl. oilseeds)	2	8	–	10	16,886	99	22	17	43	77	7	11	17,162	25	17,197
0182	Sheep-cereal grains	–	12	1	13	92	23,109	9	44	168	47	12	6	23,487	14	23,514
0183	Meat cattle-cereal grains	–	1	1	2	20	5	5,356	7	10	63	1	3	5,465	7	5,474
0184	Sheep-meat cattle	–	8	–	8	14	18	4	12,866	69	94	7	2	13,074	9	13,091
0185	Sheep	–	6	1	7	17	34	3	42	19,501	47	2	1	19,647	24	19,678
0186	Meat cattle	2	10	4	16	20	7	25	37	35	32,180	18	11	32,333	54	32,403
0187	Milk cattle	–	2	2	4	14	10	6	3	4	103	19,589	2	19,731	11	19,746
0188	Pigs	–	2	–	2	1	2	–	1	2	6	1	2,897	2,910	3	2,915
	Total (ASIC Code 018)	*4*	*49*	*9*	*62*	*17,064*	*23,284*	*5,425*	*13,017*	*19,832*	*32,617*	*19,637*	*2,933*	*133,809*	*147*	*134,018*
019	Other agriculture	–	6	7	13	17	4	6	2	8	95	5	2	139	15,621	15,773
	Total (ASIC Code 01)	*1,710*	*13,491*	*6,417*	*21,618*	*17,092*	*23,297*	*5,433*	*13,021*	*19,848*	*32,768*	*19,652*	*2,937*	*134,048*	*15,805*	*171,471*
02	Services to agriculture	–	2	–	2	7	4	2	18	24	24	11	3	93	5	100
03	Forestry and logging	–	1	–	1	1	–	–	9	4	23	5	–	42	3	46
04	Fishing and hunting	–	1	–	1	2	1	–	1	2	12	–	–	18	4	23
	Total (ASIC Division A)	*1,710*	*13,495*	*6,417*	*21,622*	*17,102*	*23,302*	*5,435*	*13,049*	*19,878*	*32,827*	*19,668*	*2,940*	*134,201*	*15,817*	*171,640*
B	Mining	–	2	–	2	2	–	1	2	1	11	–	2	19	–	21
C	Manufacturing	16	81	3	100	9	7	4	16	19	102	8	5	170	34	304
D	Electricity, Gas and Water	–	–	–	–	–	–	–	1	–	6	–	–	7	–	7
E	Construction	1	28	7	36	26	16	9	28	40	159	27	5	310	36	382
F	Wholesale and Retail Trade	5	108	36	149	73	65	34	86	96	336	35	36	761	121	1,031
G	Transport and Storage	–	16	14	30	18	19	5	19	28	120	18	7	234	17	281
H	Communication	–	–	–	–	–	2	–	1	–	2	1	–	6	–	6
I	Finance, Property and Business Services	1	24	8	33	22	12	9	21	32	153	5	1	255	35	323
J	Public Administration and Defence	–	4	2	6	4	1	–	1	7	–	4	–	17	3	26
K	Community Services	2	21	1	24	13	11	5	37	25	149	10	4	254	27	305
L	Recreation, Personal and Other Services	2	13	2	17	8	10	2	10	8	55	7	1	101	22	140
	Total all industries	**1,737**	**13,792**	**6,490**	**22,019**	**17,277**	**23,445**	**5,504**	**13,271**	**20,134**	**33,920**	**19,783**	**3,001**	**136,335**	**16,112**	**174,466**

Financial statistics

Estimates of selected financial aggregates of enterprises predominantly engaged in agricultural activity are shown in the following tables. The estimates have been derived from the triennial Agricultural Finance Survey. Up to 1977–78 the survey was conducted on an annual basis. The notation 'S.E.%' stands for 'standard error %' which is a measure of the sampling error resulting from the use of sampling techniques as opposed to the results which would have been obtained from a comparable complete collection. A more detailed explanation of standard errors and other terms used in the tables, as well as more detailed statistics, is given in the publication *Agricultural Industries, Financial Statistics, Australia, 1980–81* (7507.0). The next Agricultural Finance Survey will be conducted in 1984–85 with reference to the year 1983–84.

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, 1974–75 TO 1977–78 AND 1980–81

	1974–75		*1975–76*		*1976–77*		*1977–78*		*1980–81*	
	$m	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*
Sales from crops	2,345.5	2	2,545.2	3	2,900.4	2	2,281.5	2	4,543.7	1
Sales from livestock	1,099.7	5	1,103.5	3	1,404.3	2	1,677.8		3,134.6	2
Sales from livestock products	1,382.7	2	1,461.4	3	1,632.4	2	1,682.0	1	2,422.2	2
Turnover	4,985.8	2	5,237.1	2	6,133.6	1	5,874.2	1	10,439.7	1
Purchases and selected expenses	2,278.1	2	2,514.4	3	2,690.4	1	2,838.7	1	5,283.5	1
Value added	2,897.3	3	2,783.1	5	3,310.0	1	2,869.9	1	5,034.9	2
Adjusted value added	2,576.0	4	2,449.1	2	2,924.6	2	2,472.6	2	4,471.7	2
Gross operating surplus	2,083.8	4	1,097.4	5	2,401.7	2	1,896.4	2	3,669.1	2
Cash operating surplus	1,658.7	3	1,594.1	3	2,291.8	2	1,801.6	2	3,419.1	2
Total net capital expenditure	620.0	4	801.7	4	820.9	3	772.7	3	1,301.3	3
Gross indebtedness	2,972.5	4	3,422.2	4	3,397.0	3	3,395.8	3	4,941.0	3

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, 2 1980–81
(\$ million)

	N.S.W	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. (a)*
Sales from crops	1,048.8	737.5	1,413.4	559.3	710.6	49.1	4,543.7
Sales from livestock	989.2	658.2	617.7	278.1	372.1	97.3	3,134.6
Sales from livestock products	667.1	715.5	249.2	281.9	407.9	81.4	2,422.2
Turnover	2,798.3	2,166.2	2,383.7	1,143.5	1,536.9	238.2	10,439.7
Purchases and selected expenses	1,570.3	1,030.3	1,151.7	515.2	800.8	135.0	5,283.5
Value added	1,136.8	1,121.1	1,192.8	651.8	727.7	115.1	5,034.9
Adjusted value added	961.6	998.2	1,079.6	594.6	659.3	100.3	4,471.7
Gross operating surplus	750.7	852.0	869.7	508.7	569.7	71.3	3,669.1
Cash operating surplus	733.4	797.9	834.2	448.7	514.0	44.9	3,419.1
Total net capital expenditure	312.8	223.4	334.4	184.4	200.2	31.3	1,301.3
Gross indebtedness	1,320.7	870.3	1,030.7	571.0	870.6	171.3	4,941.0

(a) Included Northern Territory and Australian Capital Territory and estimates for multi-state enterprises.

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, BY INDUSTRY, 1980–81
(\$ million)

	Poultry (0124–0125)	*Fruit (0134–0136)*	*Vegetables (0143–0144)*	*Cereal grains oilseeds (n.e.c.) (0181)*	*Sheep-cereal grains (0182)*	*Meat cattle-cereal grains (0183)*	*Sheep-meat cattle (0184)*
Sales from crops	6.3	508.0	357.4	1,083.5	1,133.5	173.5	37.6
Sales from livestock	67.0	9.1	26.2	173.5	442.1	156.8	580.1
Sales from livestock products	199.9	2.2	5.6	87.5	528.7	5.8	311.4
Turnover	290.6	549.7	399.1	1,372.7	2,151.7	349.1	964.5
Purchases and selected expenses	193.2	242.4	203.2	684.8	1,046.7	185.7	520.1
Value added	98.5	307.3	197.0	701.6	1,084.1	152.0	366.2
Adjusted value added	88.0	278.3	182.3	634.4	979.9	131.1	297.7
Gross operating surplus	60.6	187.7	135.3	575.3	885.3	110.8	191.3
Cash operating surplus	52.2	175.6	125.5	496.5	830.3	111.4	241.5
Total net capital expenditure	20.9	66.0	39.4	202.3	297.0	53.7	85.8
Gross indebtedness	81.8	198.5	103.2	801.0	1,018.5	163.4	483.6

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, BY INDUSTRY—*continued*
1980–81
($ million)

	Sheep (0185)	*Meat cattle (0186)*	*Milk cattle (0187)*	*Pigs (0188)*	*Other agriculture (0191–0196)*	*All Industries (01)*
Sales from crops	82.5	38.2	32.3	10.0	1,080.9	4,543.7
Sales from livestock	351.5	906.8	195.9	187.3	38.3	3,134.6
Sales from livestock products	513.2	25.2	714.2	14.7	13.8	2,422.2
Turnover	970.9	1,013.2	965.1	217.4	1,195.8	10,439.7
Purchases and selected expenses	511.0	595.6	447.9	157.7	495.1	5,283.5
Value added	463.1	362.6	535.4	64.4	702.7	5,034.9
Adjusted value added	403.7	283.8	486.5	56.4	649.7	4,471.7
Gross operating surplus	320.4	188.2	432.7	39.3	542.1	3,669.1
Cash operating surplus	271.1	214.7	371.1	26.1	502.9	3,419.1
Total net capital expenditure	99.3	123.8	101.9	26.1	184.9	1,301.3
Gross indebtedness	514.0	525.2	550.0	105.2	396.4	4,941.0

Value of agricultural commodities produced and index of values at constant prices

Definitions

Gross value of commodities produced is the value placed on recorded production at the wholesale prices realised in the market place.

Marketing costs include freight, cost of containers, commission and other charges incurred in marketing.

Local value of commodities produced is the value placed on commodities at the place of production and is ascertained by deducting marketing costs from the gross value.

Index of values at constant prices is the index of the gross value of commodities produced at constant prices, i.e. it is a measure of change in value after the direct effects of price changes have been eliminated.

VALUES OF AGRICULTURAL COMMODITIES: 1981–82

	Gross value of agricultural commodities produced	*Marketing costs*	*Local value of commodities produced*	*Index of values at constant prices of agricultural commodities produced(a) (Base year: 1979–80 = 1000)*
	$m	$m	$m	
Crops	6,311.9	933.1	5,378.8	1054
Livestock slaughterings and other disposals	3,295.6	265.2	3,030.4	990
Livestock products	3,100.6	196.0	2,904.6	993
Total agriculture	**12,708.2**	**1,394.4**	**11,313.8**	**1021**

(*a*) Weighted by average unit values for the year 1979–80.

Publications

Two preliminary estimates of value of commodities produced are published: *Value of Agricultural Commodities Produced, Australia First Estimates* (7501.0) and *Value of Agricultural Commodities Produced, Australia Second Estimates* (7502.0). A final publication, *Value of Agricultural Commodities Produced, Australia* (7503.0), contains Indexes of Values at Constant Prices.

Index of Agricultural Commodities Produced

The index is consistent in scope with those of previous years. The indexes are weighted by the average unit values for the year 1979–80 with a reference base of 1979–80=1000.

For further details on how these and earlier series were calculated *see* Year Book No. 61, pages 1063–65 and *Value of Agricultural Commodities Produced, Australia* (7503.0).

GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED

($m)

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
Crops—						
Barley for grain	205.0	339.1	449.8	380.9	463.4	270.3
Oats for grain	69.1	100.5	98.8	139.5	155.7	119.3
Wheat for grain	934.9	2,295.8	2,478.0	1,684.1	2,599.4	1,543.0
Other cereal grains	145.5	222.3	218.9	327.6	294.1	248.9
Sugar cane cut for crushing	420.5	396.5	548.2	799.7	590.2	484.0
Fruit and nuts	324.0	387.7	406.6	459.8	464.4	499.4
Grapes	141.6	150.1	231.1	178.2	222.8	207.1
Vegetables	324.4	403.4	402.3	509.0	554.3	507.4
All other crops (*a*)	482.0	617.2	707.3	827.2	967.6	922.0
Total crops	*3,047.0*	*4,912.5*	*5,540.8*	*5,305.9*	*6,311.9*	*4,801.4*
Livestock slaughterings and other disposals (*b*)—						
Cattle and calves (*c*)	1,176.9	2,154.6	2,386.0	2,056.5	1,890.1	1,984.9
Sheep and lambs	344.8	445.1	654.3	718.9	646.7	454.2
Pigs	212.7	253.8	311.3	337.5	396.1	412.4
Poultry	220.0	244.2	307.2	361.4	362.7	414.4
Total livestock slaughterings and other disposals	*1,954.4*	*3,097.7*	*3,658.8*	*3,474.3*	*3,295.6*	*3,265.9*
Livestock products—						
Wool	1,206.3	1,374.5	1,651.4	1,669.5	1,788.7	1,763.9
Milk	553.3	627.7	676.0	(*d*) 885.1	(*d*) 1,033.9	(*d*) 1,060.0
Eggs	196.3	196.9	216.1	(*d*) 227.4	(*d*) 253.4	(*d*) 274.0
Total livestock products (e)	*1,970.4*	*2,214.5*	*2,564.3*	*2,803.8*	*3,100.6*	*3,119.7*
Total value of agricultural commodities produced	**6,971.8**	**10,224.7**	**11,763.9**	**11,584.1**	**12,708.2**	**11,187.0**

(*a*) Includes pastures and grasses. Excludes crops for green feed or silage. (*b*) Includes net exports of livestock. (*c*) Includes dairy cattle slaughtered. (*d*) Excludes the A.C.T. (*e*) Includes honey and beeswax. (*f*) Includes Australian Capital Territory milk and eggs.

INDEX OF VALUES AT CONSTANT PRICES OF AGRICULTURAL COMMODITIES PRODUCED (*a*)

(*Base year:* 1979 – 80 = 1000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Crops—						
Barley for grain	769	644	1082	1000	724	932
Oats for grain	760	702	1250	1000	799	1146
Wheat for grain	732	579	1127	1000	663	1017
Other cereal grains	970	821	1207	1000	1233	1417
Sugar cane (*b*)	1135	1146	984	1000	1121	1165
Fruit and nuts	903	851	1022	1000	1069	994
Grapes	800	801	783	1000	825	984
Vegetables	877	913	998	1000	1011	1056
All other crops (*c*)	737	766	1009	1000	970	1111
Total	*812*	*729*	*1068*	*1000*	*839*	*1054*
Livestock slaughterings and other disposals—						
Cattle and calves (*d*)	1271	1396	1290	1000	938	1005
Sheep and lambs	860	863	830	1000	1014	955
Pigs	843	906	904	1000	1061	1038
Poultry	697	785	866	1000	968	893
Total (e)	*1111*	*1206*	*1138*	*1000*	*965*	*990*
Livestock products—						
Wool	992	956	994	1000	990	1012
Milk	1045	948	1031	1000	947	964
Eggs	990	1046	1017	1000	959	927
Total (f)	*1003*	*959*	*1004*	*1000*	*974*	*993*
Total agricultural commodities produced	**947**	**929**	**1076**	**1000**	**908**	**1021**

(*a*) Indexes of values at constant prices (weighted by average unit values of the year 1979-80). (*b*) Sugar cane cut for crushing and planting. (*c*) Includes pastures and grasses. Excludes crops for green feed or silage. (*d*) Includes dairy cattle slaughtered. (*e*) Component series based on carcass weight. (*f*) Includes honey and beeswax.

Apparent consumption of foodstuffs and nutrients

Estimates of consumption in Australia are compiled by deducting net exports from the sum of production and imports and allowing for recorded movement in stocks of the respective commodities. The term 'consumption' is used in a specialised sense, since the quantities actually measured are broadly the quantities available for consumption at a particular level of distribution, ie ex-market, ex-store or ex-factory depending on the method of marketing and/or processing. Because consumption of foodstuffs is measured, in general, at 'producer' level no allowance is made for wastage before they are consumed. The effect of ignoring wastage is ultimately to overstate consumption but it is believed that more efficient distribution and storage methods in recent years have cut down wastage. Furthermore, it is likely that many of the foodstuffs are being supplemented by householders self-supplies over and above the broad estimate already made.

The estimates of consumption per capita have been derived by using Estimated Resident Population (ERP), which is compiled according to the place of usual residence of the population and includes an estimate for those persons temporarily overseas. Following intercensal revisions of ERP, data in the following two tables have been extensively revised.

More detailed information on the consumption of foodstuffs is contained in the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0). For some commodities, more timely information is contained in the publication *Apparent Consumption of Selected Foodstuffs, Australia (Preliminary)* (4315.0).

APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS

(Kg—unless otherwise indicated)

Commodity	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Meat—					
Carcass meat—					
Beef and veal	*67.5*	*55.1*	*46.4*	*44.7*	*49.4*
Beef	61.9	51.6	43.8	42.4	46.7
Veal	5.6	3.4	2.5	2.3	2.6
Lamb	13.7	14.0	15.7	16.0	16.3
Mutton	3.7	4.5	5.0	4.9	3.5
Pigmeat	4.5	3.8	4.8	5.6	5.8
Total carcass meat	*89.4*	*77.4*	*71.8*	*71.3*	*75.0*
Offal and meat, n.e.i.	6.4	5.1	4.0	4.3	4.5
Canned meat (canned weight)	1.7	1.4	1.4	1.5	1.2
Bacon and ham (cured carcass weight)	6.0	6.5	6.3	6.8	6.3
Total meat (converted to carcass equivalent weight)	**106.1**	**93.0**	**85.8**	**86.6**	**89.8**
Poultry—					
Poultry (dressed weight)	16.8	18.8	20.2	20.3	19.1
Seafood—					
Fresh and frozen (edible weight)—					
Fish—					
Australian	1.6	1.6	1.3	1.3	1.3
Imported	1.7	1.5	1.9	2.1	1.4
Crustacea and molluscs	0.8	0.9	0.4	0.9	0.9
Seafood otherwise prepared (product weight)—					
Australian	0.5	0.6	0.7	1.0	0.7
Imported—					
Fish	1.8	1.6	1.9	1.8	1.9
Crustacea and molluscs	0.4	0.3	0.3	0.4	0.5
Total seafood	**7.0**	**6.6**	**6.6**	**7.5**	**6.6**
Milk and Milk Products—					
Market milk (fluid whole) (a) (litres)	100.3	100.6	103.4	104.0	103.1
Condensed, concentrated and evaporated milk—					
Full cream sweetened	0.8	0.7	0.7	0.9	0.6
Full cream unsweetened	2.3	2.5	2.2	2.7	2.5
Skim	1.5	1.6	1.4	1.0	1.1
Powdered milk—					
Full cream	1.4	0.9	0.8	0.9	0.9
Skim	3.0	3.2	3.7	3.1	2.8
Infants' and invalids' food	1.3	1.1	1.1	1.0	1.3
Cheese (natural equivalent weight)	5.6	6.0	6.6	6.6	7.0
Total (converted to milk solids, fat and non-fat)	**22.5**	**22.5**	**23.5**	**23.1**	**23.0**

APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS—*continued*

(Kg—unless otherwise indicated)

Commodity	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Fruit and Fruit Products—					
Fresh fruit (incl. fruit for fruit juice)—					
Citrus	35.4	35.5	40.2	41.4	39.1
Other	33.2	34.4	39.3	35.8	40.0
Jams, conserves, etc	1.8	2.3	1.5	1.5	1.8
Dried fruit	1.9	2.1	2.5	2.2	2.5
Processed fruit	10.7	10.5	12.4	12.7	10.8
Total (fresh fruit equivalent)	**91.1**	**93.0**	**106.1**	**103.3**	**104.1**
Vegetables—					
White potatoes	50.4	51.5	54.9	54.9	57.6
Other root and bulb vegetables	16.9	17.2	17.3	17.5	18.7
Tomatoes	13.1	13.7	14.5	15.5	16.9
Leafy and green vegetables	22.5	27.5	25.1	22.3	20.7
Other vegetables	17.7	19.5	17.6	17.5	16.9
Total (fresh equivalent weight)	**120.6**	**129.4**	**129.4**	**127.6**	**130.8**
Grain Products—					
Flour(b)	67.0	69.7	70.5	70.7	72.0
Breakfast foods—					
Oatmeal and rolled oats	0.6	0.9	0.3	0.7	0.7
Other (from grain)	7.4	7.4	6.9	7.0	7.2
Total breakfast foods	*7.9*	*8.3*	*7.2*	*7.7*	*7.9*
Table rice	2.4	2.5	2.5	2.9	2.9
Total grain products	**77.4**	**80.5**	**80.2**	**81.3**	**82.8**
Bread	47.7	46.8	48.0	46.1	47.5
Eggs and Egg Products—					
Total (eggs in shell weight)	12.3	12.5	12.5	12.4	12.5
Equivalent number of eggs	218	221	219	219	222
Nuts (in shell)—					
Peanuts	2.7	0.9	1.6	1.7	1.2
Tree nuts	3.1	2.6	2.9	3.2	3.3
Oils and fats—					
Butter	5.1	4.5	4.6	4.3	4.3
Total margarine	*8.6*	*8.9*	*8.9*	*9.2*	*9.5*
Table margarine	5.6	5.9	6.4	6.7	6.8
Other margarine	2.9	2.9	2.4	2.5	2.7
Total (fat content)(c)	**21.6**	**21.4**	**21.5**	**21.5**	**21.8**
Sugar—					
As refined sugar	14.7	14.1	12.8	13.7	12.5
In manufactured foods	34.6	35.1	34.6	35.0	34.8
Total	*49.3*	*49.2*	*47.4*	*48.7*	*47.2*
Honey	1.0	0.8	0.9	0.6	0.8
Total(d)	**53.6**	**53.2**	**51.6**	**52.9**	**51.4**
Beverages—					
Tea	1.6	1.7	1.6	1.5	1.6
Coffee(*e*)	1.3	1.7	1.7	1.9	2.0
Aerated and carbonated waters (litres)	68.4	66.1	63.9	67.6	64.2
Beer (litres)	134.6	130.7	132.2	129.2	128.9
Wine (litres)	14.2	16.4	17.3	18.2	19.1
Spirits (litres alcohol)	1.3	1.1	1.0	1.1	1.2

(*a*) Prior to 1978 79 was known as Fluid Whole Milk. (*b*) Includes flour used for breadmaking. (*c*) Includes an estimate for vegetable oils and other fats. (*d*) Includes sugar content of syrups and glucose. (*e*) Coffee and coffee products in terms of roasted coffee.

Nutrients

The nutrients table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for per capita consumption.

For further information on the level of nutrient intake *see* the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION(*a*)
(Per capita per day)

Nutrient	*Unit*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Protein—						
Animal	g	69.8	65.9	64.5	64.8	65.6
Vegetable	g	31.7	32.0	32.4	32.8	33.1
Total	*g*	*101.5*	*97.9*	*96.9*	*97.6*	*98.7*
Fat (from all sources)	g	152.1	144.2	142.8	145.4	147.6
Carbohydrate	g	389.3	394.5	395.1	399.8	399.4
Calcium	mg	892.1	902.8	925.8	916.2	918.2
Iron	mg	15.6	15.1	14.5	14.7	15.1
Vitamin A activity	µg	1,636.5	1,550.1	1,434.9	1,499.4	1,522.3
Vitamin C (*b*)—						
Unadjusted	mg	101.2	105.6	108.7	109.0	108.4
Adjusted	mg	72.7	75.6	80.3	80.3	80.6
Thiamin (*b*)—						
Unadjusted	mg	1.8	1.7	1.7	1.8	1.8
Adjusted	mg	1.5	1.5	1.5	1.5	1.5
Riboflavin	mg	2.8	2.7	2.6	2.6	2.7
Niacin (*b*)—						
Unadjusted	mg	24.1	22.6	22.2	22.5	22.7
Adjusted	mg	41.0	38.9	38.4	37.8	39.1
Energy value	kJ	14,505	14,226	14,164	14,357	14,470

(*a*) Figures are based on conversion factors calculated from the revised and enlarged edition of S. Thomas and M. Corden *Metric Tables of Composition of Australian Food*, Canberra, 1977. (*b*) Data for vitamin C, Thiamin and Niacin show adjustments made for loss of nutrients in cooking and the extra niacin obtained from the metabolism of protein.

Land tenures

Land tenure statistics, in the main, relate to land held under freehold tenure ('alienated or in process of alienation') or leasehold tenure ('leased or licenced') with all agricultural establishments falling within these categories. Descriptions of the land tenure systems of the States and the Territories, and conspectuses of land legislation in force were provided in Year Book No. 48 and previous issues (*see also* Year Book No. 50, page 85.

Disposal of crown lands

For a description of the provisions that exist in all mainland States for the disposal of crown lands for public purposes, for unconditional purchase and occupation under lease or licence, *see* Year Book No. 61, page 742.

Closer settlement and war service settlement

Particulars of these are given in issues of the Year Book up to No. 22, and in Year Book Nos. 48, 55 and 61.

Alienation and occupation of crown lands

For data relating to Land Tenures, in the States and Territories, *see* Year Book No. 66, page 285 and Year Book No. 67, page 321.

Land utilisation in Australia

The total area under tenure differs from the total area of agricultural establishments (shown below) by amounts which represent unused land or land held for non-agricultural purposes. In general, land in the more fertile regions tends to be mostly freehold, while the less productive land is held under Crown lease or licence.

AREA OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY

(Million hectares)

At 31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust. (incl. A.C.T.)*
1978 . . .	64.8	14.7	155.1	62.5	114.5	2.3	75.5	489.4
1979 . . .	65.1	14.4	156.3	62.7	116.2	2.2	76.2	493.2
1980 . . .	65.0	14.7	157.7	62.8	114.9	2.2	78.2	495.6
1981 . . .	65.2	14.7	157.5	62.4	115.8	2.2	77.6	495.4
1982 . . .	63.4	14.4	157.1	62.9	113.5	2.2	77.1	490.8
1983p . . .	64.9	14.4	157.2	62.8	114.7	2.2	76.0	492.1

LAND UTILISATION: AUSTRALIA

(Million hectares)

	Area of			*Total*	
Year	*crops(a) (b)*	*sown pastures and grasses (b)*	*Balance (c)*	*Area of establishments*	*Percentage of Australian land area (768,284,000 hectares)*
1977–78	16.8	26.6	446.0	489.4	63.7
1978–79	17.4	27.7	448.0	493.2	64.2
1979–80	18.0	27.1	450.6	495.6	64.5
1980–81	18.3	24.9	452.3	495.4	64.5
1981–82	19.6	26.9	444.2	490.8	63.9
1982–83p	19.4	25.8	446.6	492.1	64.1

(*a*) Excludes pastures and grasses harvested for hay and seed which have been included in 'sown pastures and grasses'.
(*b*) Prior to 1981-82 figures related to area 'used for' crop or pasture, i.e., an area used for more than one purpose during the year was counted only once. From 1981-82, an area double cropped or an area of pasture also planted to crop has been counted separately each time used.
(*c*) Used for grazing, lying idle, fallow, etc.

The total area of agricultural establishments in 1982–83 constituted 64.1 per cent of the Australian land area, the remainder being urban areas, State forests and mining leases, with an overwhelming proportion of unoccupied land (mainly desert). The balance data includes large areas of arid or rugged land held under grazing licences but not always used for grazing. Balance data also includes variable amounts of fallow land.

The crop area data represent up to 4.0 per cent of the area of agricultural establishments and emphasises the relative importance of the livestock industry in Australia—sheep in the warm, temperate, semi-arid lands and beef cattle in the tropics. The agricultural labour force (*see* pages 308-309) is used on large areas of land with low carrying capacity.

Crops

For this section, statistics relating to crop areas and production have been obtained from the annual Agricultural Census. The census returns are collected in all States and the two Territories at 31 March each year and relate mainly to crops sown in the previous twelve months.

Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a special collection after the harvest is completed. Additional statistics relating to value of agricultural commodities produced, manufactured production and overseas trade are also included. Agricultural Census data published in this section refer to the 'agricultural' year ended 31 March, while other data refer to the year ended 30 June; but for most purposes there will be little error involved in considering 'agricultural year' data as applying to the financial year.

The following table shows the area of crops in each of the States and Territories of Australia since 1860–61.

AREA OF CROPS(*a*): 1860–61 TO 1981–82

('000 hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1860–61 . . .	100	157	2	145	10	62	–	–	475
1870–71 . . .	156	280	21	325	22	64	–	–	868
1880–81 . . .	245	627	46	846	26	57	–	–	1,846
1890–91 . . .	345	822	91	847	28	64	–	–	2,197
1900–01 . . .	990	1,260	185	959	81	91	–	–	3,567
1910–11 . . .	1,370	1,599	270	1,112	346	116	–	–	4,813
1920–21 . . .	1,807	1,817	316	1,308	730	120	–	1	6,099
1930–31 . . .	2,756	2,718	463	2,196	1,939	108	1	2	10,184
1940–41 . . .	2,580	1,808	702	1,722	1,630	103	–	2	8,546
1949–50 . . .	2,295	1,881	832	1,518	1,780	114	–	4	8,424
1954–55 . . .	2,183	1,904	1,049	1,711	2,069	122	–	2	9,040
1959–60 . . .	2,888	1,949	1,184	1,780	2,628	130	1	3	10,564
1964–65 . . .	4,182	2,621	1,605	2,414	3,037	163	2	4	14,028
1967–68 . . .	4,590	2,208	1,883	2,191	3,592	106	6	2	14,578
1968–69 . . .	5,509	2,529	2,071	2,596	3,839	110	6	3	16,665
1969–70 . . .	4,999	2,212	2,208	2,290	3,912	98	6	2	15,728
1970–71 . . .	3,967	1,732	1,791	1,998	3,826	80	2	1	13,397
1971–72 . . .	4,186	1,925	2,017	2,278	3,751	67	7	1	14,231
1972–73 . . .	4,329	1,943	1,963	2,122	3,814	80	12	1	14,265
1973–74 . . .	4,628	1,981	1,786	2,451	4,133	74	6	1	15,060
1974–75 . . .	4,089	1,772	1,898	2,257	3,754	67	7	1	13,845
1975–76 . . .	4,285	1,851	2,010	2,116	4,208	60	8	1	14,539
1976–77 . . .	4,520	1,943	2,026	2,036	4,417	65	2	1	15,010
1977–78 . . .	4,984	2,163	2,107	2,564	4,910	70	1	1	16,800
1978–79 . . .	5,020	2,209	2,307	2,827	4,993	80	2	1	17,438
1979–80 . . .	5,243	2,243	2,334	2,771	5,281	79	2	1	17,954
1980–81 . . .	5,208	2,180	2,481	2,772	5,547	84	1	1	18,273
1981–82 . . .	5,744	2,184	2,765	2,865	5,963	90	2	1	19,613
1982–83p . .	5,160	2,250	2,681	2,794	6,412	100	3	1	19,401

(*a*) The classification of crops was revised in 1971–72 and adjustments made to statistics back to 1967–68. After 1966–67 lucerne for green feed, hay and seed, and pasture cut for hay and harvested for seed or green feed are excluded.

NOTE: From 1970–71 to 1980–81 figures related to area 'used for' crops, ie, an area used for more than one purpose during the year was counted only once. From 1981–82, an area double cropped has been counted separately each time used.

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the country. Generally, cereal crops (excluding rice, maize and sorghum) are grown in all States over wide areas, while other crops are confined to specific locations in a few States. However, scanty or erratic rainfall, limited potential for irrigation and unsuitable soils or topography have restricted intensive agriculture. Despite this, agricultural production has increased over time to meet increased demands both in Australia and from overseas.

The following table provides an Australian summary of the area, production and gross value of the principal crops.

CROPS: AREA, PRODUCTION AND GROSS VALUE

	Area ('000 hectares)			*Production ('000 tonnes)*			*Gross value ($m)*		
Crop	*1980–81*	*1981–82*	*1982–83p*	*1980–81*	*1981–82*	*1982–83p*	*1980–81*	*1981–82*	*1982–83p*
Cereals for grain									
Barley	2,451	2,685	2,454	2,682	3,450	1,798	381	463	270
Grain sorghum	658	649	698	1,204	1,317	n.y.a.	152	140	134
Maize	56	61	59	173	212	n.y.a.	26	30	16
Oats	1,093	1,388	1,213	1,128	1,617	829	139	156	119
Rice	104	123	83	728	854	n.y.a.	138	104	77
Wheat	11,283	11,885	11,546	10,856	16,360	8,901	1,684	2,599	1,543
Legumes for grain	186	267	409	168	261	n.y.a.	32	44	60
Crops for hay									
Oats	220	275	270	613	788	627	41	59	n.y.a.
Wheat	79	79	112	169	201	207	14	14	n.y.a.
Crops for green feed, silage									
Barley	76	59	107	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Forage sorghum	104	77	120						
Oats	684	628	741						
Wheat	73	32	134						
Sugar cane cut for crushing	288	316	319	23,976	25,094	24,785	800	590	484
Tobacco	7	7	7	15	13	n.y.a.	62	59	68
Cotton	78	92	84	259	325.	n.y.a.	147	182	167
Peanuts	27	33	37	43	58	n.y.a.	37	37	13
Linseed	10	7	n.y.a.	7	6	n.y.a.	2	2	–
Rapeseed	24	16	n.y.a.	17	15	n.y.a.	4	3	2
Safflower	18	33	10	8	20	4	2	5	2
Sunflower	198	178	169	139	115	n.y.a.	34	28	25
Fruit (excl. grapes)	99	102	103	–	–	–	460	464	499
Fruit									
Orchard	83	85	86	–	–	–	366	365	n.y.a.
Oranges	n.a.	n.a.	n.a.	424	376	n.y.a.	86	90	n.y.a.
Apples				307	294	n.y.a.	119	124	126
Pears				146	110	n.y.a.	41	31	42
Peaches				79	65	64	26	23	21
Bananas	8	8	7	124	130	131	60	61	64
Pineapples	7	7	6	123	126	111	20	21	27
Grapes	70	68	69	743	885	750	178	223	207
Vegetables	103	107	103	–	–	–	509	554	507
Potatoes	36	36	38	866	919	n.y.a.	170	181	154
Total, all crops (excluding pastures)	**18,273**	**19,613**	**19,401**	–	–	–	**5,066**	**5,998**	**4,506**

In the tables that follow, crop statistics are shown in these groupings: wheat, coarse grains, rice, oilseeds, sugar, vegetables, fruit, grapes and other crops such as tobacco, mushrooms and fodder crops.

Cereal grains

In Australia, cereals are conveniently divided into autumn-winter-spring growing ('winter' cereals) and spring-summer-autumn growing ('summer' cereals). Winter cereals such as wheat, oats, barley and rye are usually grown in rotation with some form of pasture such as grass, subterranean clover, medics or lucerne. In recent years, alternative winter crops such as rapeseed, field peas and lupins have been introduced into cereal rotation in areas where they had not previously been grown. Rice, maize, sorghum and the millets are summer cereals with the latter two being grown in association with winter cereals in some areas. In Northern Queensland and Western Australia there are two rice growing seasons—a dry season winter crop and a wet season summer crop.

Cereals for grain form a significant percentage of both the value of Australia's agricultural commodities and of the country's export earnings. The following table shows the significance of cereal grains in the last 6 years.

CEREAL GRAINS IN AUSTRALIA: A PERSPECTIVE

	Cereal grains(a)					
Year	*Gross value*	*Export value f.o.b.*	*Total agriculture gross value*	*Total Australian exports—all produce value f.o.b.*	*Gross value of cereal grains as a percentage of gross value of agriculture*	*Export value of cereal grains as a percentage of total Australian exports*
	$m	$m	$m	$m	per cent	per cent
1977–78	1,354.8	1,261.9	6,972	12,270	19.4	10.3
1978–79	2,957.6	1,082.0	10,225	14,247	28.9	7.6
1979–80	3,245.4	2,764.7	11,764	18,870	27.6	14.7
1980–81	2,532.0	2,160.6	11,610	19,169	21.8	11.3
1981–82	3,512.6	2,367.9	12,708	19,581	27.6	12.1
1982–83p	2,181.5	1,669.7	11,187	22,205	19.4	7.5

(*a*) Principally wheat, barley, oats, grain sorghum, rice and maize, with panicum/millet, canary seed and rye being minor cereals.

For more up-to-date and detailed information on cereals for grain *see* the following publications: *Agricultural Industries: Structure of Operating Units, Australia* (7102.0), *Agricultural Land Use and Selected Inputs, Australia* (7411.0), *Principal Agricultural Commodities, Australia (Preliminary)* (7111.0), *Selected Agricultural Commodities, Australia (Preliminary)* (7112.0), *Crops and Pastures, Australia* (7321.0), *Cereal Grains: Estimates of Intended Sowings, Australia* (7304.0), *Cereal Grains: Estimates of Area Sown, Australia* (7,312.0), *Value of Agricultural Commodities Produced: Australia, First Estimates* (7501.0), *Value of Agricultural Commodities Produced: Australia, Second Estimates* (7502.0), *Value of Agricultural Commodities Produced, Australia* (7503.0).

Wheat

Wheat is grown in all States except the Northern Territory, and is the most important crop in Australia in terms of area, production and value of exports. Factors which have contributed to the development of the industry are the increasing demand from and the organisation of overseas markets as well as research and the availability of suitable cropping land. As a large proportion of the wheat crop is exported, wheat marketing arrangements play an important role. The Australian Wheat Board was constituted in September 1939, under *National Security* (*Wheat Acquisition*) *Regulations*, to purchase, sell or dispose of wheat or wheat products and to manage or control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired and such other matters as were necessary to give effect to the regulations. The major purpose in founding the Australian Wheat Board with responsibility for acquiring and marketing the Australian wheat crop was the protection of wheat farmers by lowering financial risks on each crop. The strength of the Australian Wheat Board is derived from its ability to act as the single Australian authority responsible for marketing of wheat domestically and abroad and to use that function as a basis for careful co-ordination of sales efforts and market development. The *Wheat Industry Stabilization Act* 1948 reconstituted the Australian Wheat Board to administer the first stabilisation plan, the concept of which was to provide growers with a 'guaranteed price' for a specific quantity of exported wheat. Until 1978 there were six Five Year Stabilisation Plans.

Wheat marketing and pricing arrangements: 1979–80 to 1983–84

On 29 November 1979 the *Wheat Marketing Act* 1979 received Royal Assent and new wheat marketing and pricing arrangements became operative for five seasons commencing from 1 October 1979. The basic elements of the new arrangements were negotiated between the Australian Wheatgrowers' Federation and Commonwealth and State Governments and necessitated the enactment of complementary Commonwealth and State legislation. Amendments to this legislation have since been made in late 1982 and early 1983.

The current wheat marketing and pricing arrangements carry forward a number of features of the previous Stabilization Plan. In this respect the main features are: the Australian Wheat Board (AWB) is maintained as the sole statutory authority responsible for the marketing of wheat in Australia and of wheat and flour sold overseas; the constitution and general powers of the Wheat Board remain largely unchanged; the legislation applies to a seven-year period except for the pricing provisions which run for five years.

The following are important features introduced in the current plan.

Guaranteed Minimum Price. Shortly after acquisition of wheat by the Australian Wheat Board, wheatgrowers receive a first payment at the Guaranteed Minimum Price (GMP) increased or decreased for such allowances as wheat quality, varietal characteristics and storage, handling and transportation charges, and for contributions to research (wheat tax) and to the Wheat Finance Fund (wheat levy). Growers may take this payment as a lump sum or as two or more payments by agreement with the Board. Adjustments to the initial allowances can also be made by the Board when the final level of such allowances has been determined. The GMP is set at 95% of the average of the net pool returns for the previous two seasons and an estimate of the net pool return for the season in question and is guaranteed by the Commonwealth Government in the sense that any deficiency between the net pool return and the GMP would be met by the Government. This has not been necessary to date. Movements in the GMP from one season to the next are subject to a limit of 15 per cent up or down.

These arrangements provide the industry with support from the Government that is designed to help it overcome any short-run down-turn in producers' returns, modified with longer-run adjustments in market returns whether these adjustments be for a rising or a falling market. The GMP for 1982–83 is $141.32 per tonne for Australian Standard White (ASW) wheat.

It is the intention that the GMP be announced around the commencement of each season on 1 October. However the Act also provides for an interim payment to be made to growers who deliver wheat to the Board prior to the determination of the GMP for that season.

Financial Arrangements. The Reserve Bank Act provides that the Board may borrow not only from the Rural Credits Department (RCD) of the Reserve Bank of Australia but also, subject to the approval of the Minister for Primary Industry, from commercial sources, both in Australia and overseas, the latter subject to Loan Council approval. Traditionally the AWB has borrowed from the RCD to obtain funds to make first advances to growers and to meet pool marketing expenses. Under the Reserve Bank Act RCD advances are for a maximum period of one year and the Board is required to repay these borrowings by 31 March in the year following the conclusion of the season.

With the introduction of GMP, it was necessary to develop commercial funding techniques to enable the Board to raise sufficient moneys from the Australian short term money market to pay growers upon delivery of their wheat. In the 1982–83 season, these borrowings amounted to $1,200 million from the domestic market and under the Act the Government was requested to meet any borrowing costs additional to those that would have been incurred had the borrowing been from the RCD. In 1983 following an amendment to the Act, the Loan Council approved the Board's borrowing overseas up to 50 percent of its prospective net borrowing requirements for 1983-84 and subsequent seasons, and the Government's requirement to meet additional borrowing costs ceased on 30 June. In the 1983–84 season the Board expects to borrow between $600 million and $1,000 million under these facilities.

The Wheat Finance Fund established by the *Wheat Marketing Act* 1979 is a $100 million revolving fund of growers' monies. The $80 million previously held in the former Wheat Prices Stabilization Fund was transferred into the Finance Fund and is supplemented by the proceeds of a levy each season (presently $2.50 per tonne) of all wheat delivered to or sold by the Board. Any excess above $100 million in the Fund is returned to growers on a first-in-first-out basis. The Wheat Finance Fund provides a source of funds from which the Board is able to re-finance any outstanding debt to the Reserve Bank on a season's pool. Borrowings from the Fund if they were ever required, would be made at a rate of interest determined by the Minister from time to time.

Amendments to legislation. During 1982 a number of amendments were proposed to the existing wheat marketing legislation. These amendments agreed to by all States and the Commonwealth Parliament expand the powers of the Board in such areas as operating on futures markets, to accumulate reserves for specific purposes, to offer optional arrangements for the payment of the GMP as well as machinery amendments designed to increase the efficiency and flexibility of the Board.

Domestic Pricing. The arrangements for the pricing of wheat sold on the domestic market recognise the different segments of the market, namely, the use of wheat for milling into flour for human consumption and the use of wheat for stockfeed and for industrial purposes.

The 1982–83 season price for Australian Standard White wheat for human consumption sold domestically is $203.46 per tonne. This amount includes a $3.39 per tonne component as the Tasmanian freight loading (see later). The price is determined according to a formula which takes account of movements in export prices and an index of prices paid by farmers while providing, over time, a margin above export prices. Movements in the formula price from year to year are subject to a limit of 20 per cent.

A loading is included in the price of wheat for human consumption and is paid into the Tasmanian Freight Fund, which is used exclusively to cover the cost of shipping wheat from the mainland to Tasmania each season.

The domestic prices for industrial and stockfeed wheats are quoted by the Board in the light of its commercial judgment and having regard to orderly marketing considerations. Prices are quoted each day and buyers may enter into contracts to fix the price of wheat for delivery up to six months in advance. Under the provisions of the *Wheat Marketing Act* 1979 the Board has appointed two Consultative Groups representing grower and user interests. The function of the Groups is to provide relevant and up to date information and assessments to be taken into account by the Board, in determining prices for wheat sold for stockfeed and industrial purposes, having regard to the aims of balancing the commercial interests of producers and users and maintaining the orderly marketing of wheat. The Groups do not recommend price levels. The information received by the Board from the Groups, its assessment of this information and its subsequent pricing decisions are reviewed by the Australian Agricultural Council.

Domestic Marketing Arrangements. The Australian Wheat Board exercises sole authority for the export marketing of wheat and flour and for the marketing of wheat domestically and overseas. The Board also has the power to import wheat. The Board is also authorised to issue permits to enable wheatgrowers to deliver their wheat, subject to certain conditions, other than to an authorised receiver of the Board. It is permitted to issue permits to growers:

(i) to sell seed wheat;
(ii) to sell inferior quality wheat including screenings unacceptable for receival by the Board;
(iii) to deliver wheat from a property on which it is grown to another farm under the same or joint ownership for use on the latter; or
(iv) to deliver wheat to a miller for gristing and return the produce of the gristing to the farm on which it was grown for use on that farm; or
(v) to sell wheat under authorized grower-to-buyer direct delivery transactions. Under these arrangements the Board is authorised to grant a permit for delivery by a grower direct to a buyer subject to conditions the Board determines as to price, freight allowance and the quality of the wheat. The proceeds of sale of the wheat involved are incorporated in the Board's pooling arrangements and the provisions for payments to growers apply as if the wheat had in fact been delivered to the Board's pool. However, provision is made for any quality differential agreed by the grower and buyer and for any cartage cost adjustment to be passed back to the buyer. Provision is also made for the Board to deduct from the payment to the grower a charge (covering capital, depreciation and costs of maintaining capital equipment) relating to costs associated with the bulk handling authority relevant to the particular grower. The specific charge is determined under State legislation.

Wheat which is retained by a grower on a farm on which it is grown for use on that farm does not come under the control of the Wheat Board.

IAC Reference

A reference on the wheat industry was sent to the Industries Assistance Commission in July 1982. The Commission was asked to report by 30 September, 1983 on whether assistance should be provided to the wheat industry following the 1983–84 season and, if so, the nature and extent of such assistance. The Commission was requested to have particular regard to the marketing and pricing arrangements applying to the industry.

The final IAC report was made public on 14 October, 1983. The report contained 15 recommendations. The major recommendations related to domestic marketing arrangements, to the level of underwriting and to the first advance payment. The IAC recommended that private traders be permitted to operate on the domestic market in competition with the AWB and that the price of all wheat sold on the domestic market to be longer administered. The IAC further recommended changes to the present method of underwriting the wheat price and to the determination of the payment, made upon delivery, to growers. The IAC recommended that average FOB (Fee on Board) returns to the AWB from the export of wheat in any one fiscal year be underwritten at 85 per cent of the average FOB export returns from the lowest of 3 of the preceding 4 fiscal years, and that the Minister for Primary Industry determine the first advance payment to be made to growers who deliver wheat to the AWB.

The other recommendations related to the establishment of separate pools for the 4 main classes of Australian wheat, to various administrative and reporting arrangements for the AWB, the abolition of the Wheat Finance Fund and that the AWB not be permitted to trade in futures contracts.

PLATE 34

Harvesting Wheat, New South Wales

Australian Information Service

Wheat varieties and standards of wheat

The practice of breeding wheat suitable to local conditions has long been established in Australia. William Farrer (1845–1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages as well as an improvement in the quality of wheat grown. The continuation of wheat breeding activities has led to expansions in the areas sown to wheat as well as in yields per hectare, but it is difficult to distinguish progress due to improved wheat varieties from that due to crop/pasture rotations, increased mechanisation and superphosphate-improved pastures.

Wheat quality is a complex subject but can be broadly described in terms of four parameters; grain hardness, protein content, milling performance and physical dough properties. These parameters are governed by a combination of the wheat variety and the environmental conditions under which the wheat is grown.

Australia produces only white grained wheats. This is in contrast to our major competitors who predominantly produce red-grained wheats. Within the Australian wheatbelt there exist wide ranges of soil fertility, rainfall, daylength and temperature. Through the development of varieties which complement these diverse growing conditions, it has been possible to produce wheats with qualities that are suitable to virtually all commercial applications.

Australian wheats are classified into two broad categories, namely the milling and non-milling Classes. Since 1974 there have been five Classes of Australian wheats suitable for milling purposes:

Australian Prime Hard
Australian Hard
Australian Standard White (ASW)
Australian Soft
Australian Durum

There exists within each Class a number of individual grades. In some seasons a total in excess of 30 different grades of Australian wheat have been marketed. This large number has developed to meet individual customer requirements and also to reflect the wide range of wheat types available from Australia. Prior to 1974 the majority of the Australian wheatcrop was marked under the single classification Fair Average Quality (F.A.Q.). Particulars of Australian wheat standards may be found in *Crops and Pastures, Australia* (7321.0).

Central Grain Research Laboratory

In 1976, the Australian Wheat Board established this laboratory in Sydney as an addition to the facilities of the Bread Research Institute of Australia. The main functions of the laboratory are to test and report on the Australian crop, to analyse and compare competitor wheats from other countries and to develop research programs to aid the marketing of wheat.

WHEAT: AREA, PRODUCTION AND RECEIVALS

	Area		*Production*		*Australian Wheat Board receivals(a)*
Season	*For grain*	*All purposes*	*Grain*	*Gross value*	
	'000 ha	'000 ha	'000 tonnes	$m	'000 tonnes
1977–78	9,955	10,078	9,370	934.9	8,540
1978–79	10,249	10,321	18,090	2,295.8	17,456
1979–80	11,153	11,249	16,188	2,478.0	15,327
1980–81	11,283	11,436	10,856	1,684.1	10,058
1981–82	11,885	11,996	16,360	2,599.4	15,545
1982–83p	11,546	11,792	8,901	1,543.0	(*b*)7,937

(*a*) Australian Wheat Board receivals are for the season commencing 1 October; production data is for the year ending 31 March. (*b*) Receivals to 30 September 1983.

WHEAT FOR GRAIN: AREA AND PRODUCTION, BY STATE

Season	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australia*
			AREA ('000 hectares)				
1977–78	3,377	1,270	607	1,090	3,609	1	9,955
1978–79	3,162	1,337	747	1,295	3,706	1	10,249
1979–80	3,415	1,457	733	1,424	4,121	2	11,153
1980–81	3,345	1,431	727	1,445	4,333	2	11,283
1981–82	3,600	1,322	941	1,427	4,593	1	11,885
1982–83p	3,153	1,345	806	1,352	4,890	1	11,546
			PRODUCTION ('000 tonnes)				
1977–78	3,846	1,497	569	511	2,945	2	9,370
1978–79	6,640	2,998	1,962	2,086	4,400	3	18,090
1979–80	6,000	3,250	846	2,349	3,739	4	16,188
1980–81	2,865	2,538	485	1,650	3,315	3	10,856
1981–82	5,910	2,467	1,482	1,695	4,803	2	16,360
1982–83p	1,457	419	801	692	5,531	2	8,901

PRODUCTION AND DISPOSAL OF WHEAT FOR GRAIN

('000 tonnes)

Season	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Production	11,800	9,370	18,090	16,188	10,856	16,360
Less balance held on farms for—						
Seed usage	598	616	634	861	798	815
Feed and other uses	270	212				
Gross receivals	10,932	8,542	17,456	15,327	10,058	15,545
Opening stocks(*a*)	2,670	2,071	816	4,646	4,268	2,044
Total availability for sale	13,602	10,613	18,272	19,973	14,326	17,589
Export shipments—						
Wheat	9,502	7,918	11,526	13,049	9,451	10,890
Flour and wheat products(*a*)	261	180	167	148	163	178
Domestic sales—						
Flour(*a*)	1,261	1,259	1,298	1,371	1,402	954
Stockfeed	380	438	621	1,068	1,179	563
Breakfast feeds etc. (*a*)	55	43	41	45	49	58
Total disposal	11,459	9,838	13,653	15,681	12,244	12,643
Availability (—) Disposals	2,143	775	4,619	4,292	2,082	4,946
Closing stocks(*a*)	2,071	816	4,629	4,268	2,044	4,932
Apparent wastage	72	-41	-10	24	38	14

(*a*) Wheat and flour in terms of wheat.

NOTE: The Australian Wheat Board is the source of receivals, export shipments, domestic sales data, and opening and closing stocks; the ABS records other data.

Wheat pools

Details of wheat receivals by State of origin for the several Pools together with Pool payments and times of payment will be found in the latest issue of *Crops and Pastures, Australia* (7321.0).

International Wheat Agreement

A number of Agreements have operated since 1949 to provide a valuable framework for continuing international consultation and co-operation on world wheat matters, including the regular monitoring of the world wheat situation. The 1971 International Wheat Agreement (the first expiring on 30 June 1974) has been extended seven times by protocol, the most recent extension expiring on 30 June 1986. It comprises two separate legal instruments, the Wheat Trade Convention and the Food Aid Convention, linked by a common preamble. Negotiations towards a new Agreement were held in January 1978 and January-February 1979 under the auspices of the U.N. Conference on Trade and Development (UNCTAD). No consensus was reached on an Agreement with economic provisions designed to bring about a measure of price stability by the accumulation and release of internationally co-ordinated nationally-held reserve stocks. The 1979 conference was adjourned indefinitely. Subsequently, in 1980 and 1981, the International Wheat Council considered other possible bases for an Agreement with its attention focussing on a more flexible approach to stockholding with reserve stock action being taken on the basis of a consensus within the Council rather than applying automatically at a particular time as a result of price movements. With strong opposition of the U.S. Administration to the international co-ordination of holding of wheat, this approach proved not negotiable. However, the Council agreed, in December 1981, on immediate steps to strengthen the operation of the existing Agreement. The Council also decided that it was imperative to continue the search for an agreed basis for a new Agreement, keeping in view the paramount objectives of market stability and food security. While there has been no progress on a basis for a new Agreement, the current Agreement has been extended to 1986.

WHEAT EXPORTS: A COMPARISON WITH OTHER EXPORT COMMODITIES(*a*)

Year	*Wheat for grain: Exports* *Quantity*	*Wheat for grain: Exports* *Value f.o.b.*	*Total Australian exports—all produce: Value f.o.b.*	*Export value of wheat for grain as a percentage of total Australian exports*
	'000 tonnes	$m	$m	per cent
	7,945	863.5	11,652	7.4
1977–78	10,949	1,011.1	12,270	8.2
1978–79	6,824	794.2	14,247	5.6
1979–80	14,876	2,176.8	18,870	11.5
1980–81	10,552	1,729.4	19,169	9.0
1981–82	10,912	1,719.7	19,581	8.8
1982–83p	8,022	1,343.1	2,220.5	6.0

(*a*) These statistics exclude re-exports.

EXPORTS OF WHEAT AND FLOUR

Country of consignment	*Quantity ('000 tonnes)* *1980–81*	*1981–82*	*1982–83p*	*Value f.o.b. ($m)* *1980–81*	*1981–82*	*1982–83p*
			WHEAT			
Bangladesh	132.7	124.2	50.0	22.5	19.2	7.6
China—excl. Taiwan Province	1,421.3	1,361.0	1.210.0	236.5	212.0	182.0
Egypt, Arab Republic of	1,788.7	1,575.2	1,852.8	285.0	246.9	303.6
India	—	782.9	—	—	123.2	—
Indonesia	494.7	480.3	168.8	76.5	75.5	28.6
Iran	666.1	544.3	847.9	108.9	83.8	136.0
Iraq	134.8	750.5	443.8	20.9	119.8	77.8
Japan	780.9	995.1	1,000.0	125.7	156.4	167.7
Kuwait	653.1	228.6	238.6	102.7	33.9	41.0
Malaysia	292.5	294.2	160.5	46.4	44.4	26.7
Saudi Arabia	166.9	122.2	166.3	28.6	21.5	28.9
Singapore	174.9	50.7	103.6	26.5	7.6	17.1
Sri Lanka	170.8	129.8	31.0	28.0	20.8	5.4
U.S.S.R.	2,479.9	2,408.0	1,017.6	421.7	386.0	196.3
Yemen Arab Republic	257.1	332.0	119.3	42.7	51.2	18.6
Other countries	937.6	733.4	611.8	156.8	117.5	105.8
Total	**10,552.0**	**10,912.4**	**8,022.0**	**1,729.4**	**1,719.7**	**1,343.1**
			FLOUR(*a*)			
Kenya	—	—	14.9	—	—	4.2
Mauritius	16.3	21.2	16.4	3.9	5.9	4.6
New Caledonia	7.4	8.1	6.6	1.8	1.9	1.5
Papua New Guinea	12.9	0.5	0.4	3.5	0.1	0.1
Polynesia (FR)	2.7	3.2	2.6	0.7	0.8	0.7
Samoa (Western)	4.3	5.0	4.7	1.0	1.1	1.1
Solomon Islands	3.4	3.0	4.4	0.9	0.7	1.1
Sudan	14.6	—	—	—	—	—
Tonga	3.6	4.9	3.7	0.9	1.1	0.9
Other countries	24.2	15.7	16.0	6.6	4.1	4.5
Total	**89.4**	**61.6**	**69.7**	**23.4**	**15.7**	**18.7**

(*a*) Meal and flour of wheat and flour of meslin.

WORLD WHEAT: AREA AND PRODUCTION

Source: International Wheat Council, *World Wheat Statistics, 1983*

	Area (million hectares)			Production (million tonnes)		
	1980–81	*1981–82*	*1982–83p*	*1980–81*	*1981–82*	*1982–83p*
Europe	26.2	25.4	26.3	99.1	91.4	103.1
EEC (10)	12.6	12.7	13.0	55.1	54.4	59.9
U.S.S.R.	61.5	59.2	57.3	98.2	80.0	85.0
North & Central America	40.6	46.1	45.6	86.6	104.2	108.7
Canada	11.1	12.4	12.6	19.2	24.8	27.6
U.S.A.	28.7	32.8	31.9	64.6	76.2	76.4
South America	8.9	8.7	11.1	11.8	11.5	18.1
Asia	79.5	79.5	79.9	128.3	140.5	150.1
China(*a*)	28.5	28.0	28.0	54.2	59.7	68.4
India	22.0	22.1	22.5	31.6	36.3	37.8
Iran	5.8	5.9	6.0	5.7	6.6	6.5
Pakistan	6.9	7.0	7.1	10.8	11.5	11.1
Turkey	9.1	9.5	9.4	16.6	17.0	17.5
Africa	8.0	8.0	8.0	8.7	8.8	9.8
Oceania	11.4	12.0	11.6	11.2	16.7	9.0
Australia	11.3	11.9	11.5	10.9	16.4	8.9
Total world	**236.0**	**239.0**	**239.6**	**444.0**	**453.2**	**484.0**

(*a*) Excludes Taiwan Province; FAO estimates.

NOTE 1. Crop years shown cover northern hemisphere harvests combined with those of the southern hemisphere which immediately follow.
2. The 10 members of the EEC are: Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg, Netherlands and the United Kingdom.

Coarse grains

In the late sixties and early seventies, restrictions on wheat deliveries and low returns in the sheep industry caused a resurgence of interest in coarse grain crops and the newer oilseed crops. The resultant higher level of plantings and production has been maintained, despite the lifting of wheat delivery quotas and a general improvement in market prospects for wheat, wool and meat.

Oats

Oats is traditionally a cereal of moist temperate regions. However, improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. It has a high feed value and produces a greater bulk of growth than other winter cereals; it needs less cultivation and responds well to superphosphate and nitrogen. Oats has two main uses—as a fodder crop, following sowing or fallow or rough sowing into stubble or clover pastures or as a main crop. Fodder crops can either be grazed and then harvested for grain after removal of live stock or else mown and baled or cut for chaff. Oats produced in New South Wales are marketed through a statutory board while the Victorian Oatgrowers' Pool and Marketing Company Ltd and private merchants market the bulk of oats produced in Victoria. In South Australia the Barley Marketing Act was amended in 1977 to give the Australian Barley Board powers over oat marketing in that State. Under the legislation amendments the Board controls export sales and grain resold on the local market; however, direct sales between producers and consumers are outside the Board's supervision. In Western Australia, oats are marketed under a warehousing system operated by Co-operative Bulk Handling Ltd.

Oats is usually next in importance to wheat and barley among the grain crops. About three-quarters of the crop is used domestically as stockfeed or for human consumption.

OATS FOR GRAIN: AREA, PRODUCTION AND EXPORTS

		Production		Exports	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1977–78	1,076	990	69.1	218	19.6
1978–79	1,359	1,763	100.5	290	24.9
1979–80	1,123	1,411	98.8	472	43.8
1980–81	1,093	1,128	139.5	196	27.7
1981–82	1,388	1,617	155.7	153	24.1
1982–83p	1,213	829	119.3	83	13.2

Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally as a grain crop although in some areas it is used as a fodder crop for grazing with grain being subsequently harvested if conditions are suitable. It is often grown as a rotation crop with wheat, oats and pasture. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Crops sown for malting purposes require a combination of light textured soil of moderate fertility, reliable rainfall, and mild weather during ripening. The main barley-growing areas in Australia are situated in South Australia, but considerable quantities are grown also in New South Wales, Western Australia, Victoria and Queensland. In December 1980 a joint Commonwealth/Industry research scheme for the barley industry commenced operation. The scheme is financed by a levy on barley production and a Commonwealth contribution not exceeding the total of the levy.

Barley is marketed by statutory marketing authorities in each of the mainland States. The Australian Barley Board controls marketing in both South Australia and Victoria while separate authorities operate in the three other States.

BARLEY FOR GRAIN: AREA, PRODUCTION AND EXPORTS

		Production					
				Total		*Exports*	
Year	*Area*	*2-row*	*6-row*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha		—'000 tonnes—		$m	'000 tonnes	$m
1977-78 . . .	2,803	2,261	123	2,383	205.0	1,325	121.8
1978-79	2,785	3,787	220	4,006	339.1	1,744	149.5
1979-80	2,482	3,545	159	3,703	449.8	2,962	353.5
1980-81	2,451	2,563	119	2,682	380.9	1,598	242.7
1981-82	2,685	3,252	198	3,450	463.4	1,577	241.3
1982-83p . . .	2,454	1,643	155	1,798	270.4	834	131.4

Grain sorghum

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and, more recently, columbus grass for silage, green feed and grazing; and broom millet for brooms and brushware.

Grain sorghum has been grown extensively only in the last two decades. Rapid increases in production have resulted in a substantial increase in exports over this period. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum. In Queensland, grain sorghum production is concentrated in the Darling Downs, Fitzroy and Wide Bay-Burnett Divisions. In New South Wales, the northern and north-western slopes and plains are the main areas.

In Queensland, a degree of orderly marketing is ensured by the operation of the Central Queensland Grain Sorghum Marketing Board (a statutory authority in a defined area in central Queensland) and the Queensland Graingrowers' Association, which receives sorghum mainly from southern Queensland. A State statutory marketing board handles sorghum grown in New South Wales.

GRAIN SORGHUM: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1977-78	394.1	714.4	59.5	384.5	35.4
1978-79	468.7	1,125.2	97.4	516.3	45.5
1979-80	518.6	922.0	96.1	580.4	59.8
1980-81	657.9	1,203.9	152.0	462.7	57.5
1981-82	648.6	1,316.7	140.1	1,270.9	152.8
1982-83p	697.9	n.y.a	133.8	445.0	53.9

Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. Maize for grain is almost entirely confined to the south-east regions and Atherton Tablelands of Queensland, the north coast, northern slopes and tablelands and the Murrumbidgee Irrigation Area in New South Wales. Small amounts are grown in all States, except South Australia, for green feed and silage, particularly in association with the dairy industry.

A statutory board controls the marketing of maize in the Atherton Tablelands area of Queensland while the Queensland Graingrowers' Association markets maize grown in the south-east. In New South Wales, the Yellow Maize Marketing Board for the State of New South Wales (established in 1976) which handled the marketing of maize, ceased operation on 30 September 1981. A large proportion of the crop is sold directly to food processors.

MAIZE: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1977-78	45.4	130.1	12.2	11.1	1.6
1978-79	50.0	168.8	15.6	16.9	1.3
1979-80	54.1	150.9	19.8	7.7	0.9
1980-81	56.5	172.8	26.1	29.1	3.4
1981-82	61.0	212.4	29.6	14.2	1.9
1982-83p	58.6	n.y.a	16.4	18.3	2.4

Rice

In Australia, rice was first grown commercially in 1924-25 in the Murrumbidgee Irrigation Area, one of three irrigation areas in southern New South Wales where rice is now produced. Today, about 96 per cent of Australia's rice is grown in New South Wales. The remainder is grown in the Burdekin River basin and at Mareeba in Northern Queensland with small quantities grown in the Ord River region of Western Australia.

Rice is a summer growing crop in N.S.W. The combination of irrigation water and the relatively cloudless days characteristic of summers in temperate regions of the world is the main contributing factor to the very high yields per hectare often achieved by N.S.W. growers. In Western Australia and Queensland, a winter and a summer crop are grown.

State statutory marketing boards are responsible for the marketing of the N.S.W. and Queensland crops.

RICE: AREA, PRODUCTION AND EXPORTS

		Production		*Exports*	
Year	*Area*	*Quantity(a)*	*Gross value*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	$m
1977-78	91.4	489.7	61.1	277.5	66.6
1978-79	110.2	692.2	97.8	241.2	66.2
1979-80	116.4	613.2	93.8	457.3	129.9
1980-81	103.9	727.5	138.2	281.3	99.9
1981-82	122.9	853.9	103.5	596.3	195.4
1982-83p	82.9	521.8	77.4	404.6	120.3

(*a*) In terms of paddy (or rough) rice.

Oilseeds

Specialised Oilseeds

Despite significant growth in the oilseeds industry during the late 1960's and 1970's, oilseeds remain a relatively young industry in Australian agriculture.

In recent years, production levels of the specialist oilseed crops has declined reflecting mainly the effects of drought conditions but also the rapid expansion in cotton production and farmer preference for more traditional crops such as wheat and coarse grains. The expected profitability of oilseeds relative to these crops will continue to influence future production levels in the industry. This profitability will be related to domestic and international markets for protein meals and vegetable fats and oils.

The specialist oilseed crops grown in Australia are, sunflower, soybeans, rapeseed, safflower and linseed. Sunflower and soybeans are summer grown whilst the others are winter crops. In Australia, oilseeds are crushed for their oil, which is used for both edible and industrial purposes and protein meals for livestock feeds.

Oilseed crops are grown in all States but the largest producing regions are the grain growing areas of the Eastern States.

Sunflower

When crushed, sunflower seed yields a high quality dual purpose oil used primarily to manufacture margarine, salad and cooking oils.

Queensland produces about two thirds of the Australian crop with the Darling Downs and Central Highlands being the major regions. New South Wales is the next largest producer with the North West of the State dominating production. Smaller amounts are produced in all other states except Tasmania.

Soybeans

The major uses of soybean oil are in salad and cooking oils and margarine. Small amounts are used in the production of paints, detergents and plastics. Soybean also yields a high protein feed for livestock with a small proportion used to manufacture adhesives and synthetic fibres and meats.

Queensland and New South Wales produce virtually all of Australia's soybean crop. The main producing areas are the irrigation districts of the Darling Downs and northern New South Wales. Lesser areas include the Burnett and Lockyer regions of Queensland while production of raingrown soybeans is expanding on the North Coast of New South Wales.

In irrigated areas, soybeans have increasingly been used as a rotational crop for cotton.

Rapeseed

The main use of rapeseed oil has been in salad and cooking oils with a small amount being used for industrial purposes. However, the use of rapeseed oil with a maximum erucic acid content of five per cent to be used in margarine production has been permitted in New South Wales since late 1981.

The major production area is the south east of South Australia followed by the tablelands and slopes of New South Wales. Smaller levels of production also occur in Victoria, mainly in the Western Districts and in the south coast region of Western Australia.

Following significant increases in the 1960's and 1970's, rapeseed production declined rapidly due to problems of blackleg disease and erucic acid content. Production has recovered in recent years with the development of varieties to overcome these problems and in response to the crop rotation benefits of rapeseed.

Safflower

The oil from safflower is used in the production of cooking oil, margarine, soaps, paints, varnishes, enamels and textiles. In recent years, New South Wales and Queensland together have produced around 90 per cent of Australian output. In Queensland, most production occurs in the Central Highlands with smaller amounts coming from the Dawson-Callide Valley and the Darling Downs. New South Wales production is centred on the Central West.

Wide fluctuations in safflower production since the mid 1960's have been due to variable seasonal conditions affecting yields and the profitability of other crops which has influenced plantings.

Linseed

The oil from crushed linseed is used in the manufacture of paints, varnishes, technical inks and linoleum.

The main producing areas are the wheat belt of New South Wales, the Darling Downs in Queensland, the Western Districts of Victoria and, to a lesser extent, the south-eastern districts of Victoria. Linseed production has been generally declining in recent years.

SELECTED OILSEED CROPS: AREA, PRODUCTION AND GROSS VALUE

Year	*Sunflower*	*Soybeans*	*Rapeseed*	*Safflower*	*Linseed*	*Total*	*Peanuts*
			Area ('000 hectares)				
1977–78	220.4	49.9	19.1	39.0	43.8	372.2	30.3
1978–79	260.7	53.7	22.3	74.7	13.1	424.5	36.9
1979–80	221.1	56.5	41.6	53.6	17.2	390.0	31.7
1980–81	197.7	39.6	23.6	18.3	10.0	289.2	27.1
1981–82	177.5	40.5	15.7	33.4	6.6	273.7	33.4
1982–83p	169.1	45.7	n.y.a	9.6	n.y.a	n.y.a	36.6
			Production ('000 tonnes)				
1977–78	158.3	76.5	15.7	26.3	27.9	304.7	39.0
1978–79	186.2	98.7	23.4	57.7	12.9	378.9	62.3
1979–80	141.7	82.0	41.1	30.0	14.4	309.2	38.9
1980–81	139.0	73.2	17.2	8.1	7.4	244.9	43.2
1981–82	115.1	77.1	14.5	19.6	6.0	232.3	57.6
1982–83p	n.y.a	n.y.a	n.y.a	4.0	n.y.a	n.y.a	n.y.a
			Gross Value ($ million)				
1977–78	36.6	17.6	3.0	5.4	5.0	67.6	20.2
1978–79	45.8	24.6	4.8	11.0	2.6	88.8	28.7
1979–80	36.3	21.6	9.1	6.0	3.1	76.1	22.3
1980–81	34.3	22.4	4.5	2.2	2.2	65.6	36.6
1981–82	28.3	19.8	3.3	5.2	1.6	58.2	37.0
1982–83p	24.8	n.y.a	1.9	2.3	0.5	n.y.a	12.6

Other Oilseeds

Peanuts and cottonseed are summer crops grown primarily for human consumption and fibre purposes respectively. The rapid expansion of the cotton industry in recent years has resulted in cottonseed becoming the major oilseed in Australia.

Peanuts

Peanut oil is used extensively as cooking and salad oil and in the manufacture of margarine.

The production of peanuts in Australia is centred on the Burnett and Atherton Tableland regions of Queensland. A small amount of production also occurs in New South Wales. Peanut production has been rising gradually for a number of years and 1978–79 was a record year due mainly to record yields. The 1982–83 peanut crop, which was severely affected by drought and floods, is estimated to be down to about 25,000 tonnes from 58,000 tonnes in the previous year.

Cotton

This annual shrub requires a hot climate and careful management, particularly in relation to weed, disease and insect control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials where fibre length is of little importance. The kernels, when crushed, produce an oil which is used for food and for industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Over three-quarters of Australia's total production of cotton lint is grown in New South Wales, principally in the Namoi, Macquarie and Gwydir Valleys and the Bourke area. Irrigation water for these areas is provided from the Keepit, Burrendong, Copeton and Glenlyon dams and the Darling River. The rest is grown in Queensland, in the Emerald, St George, Biloela and Darling Downs areas. Most of these areas are also irrigated. Australian production has for some time satisfied most of the requirements of local mills for short and medium staple cotton. Since the mid 1970s there has been very strong investment growth in the cotton industry and the resultant surge in plantings has resulted in large amounts of cotton becoming available for export.

Exports from the 1982–83 crop will account for about 85 per cent of production, and are expected to be about 85,000 tonnes of raw cotton (or lint), valued at around $160 million, with Japan and Hong Kong being the main markets.

A further expansion in Australian cotton plantings is expected in 1983–84. It is unlikely that local yarn spinners will increase production significantly in the medium term. Consequently any further growth in production is likely to be accompanied by a growth in cotton exports.

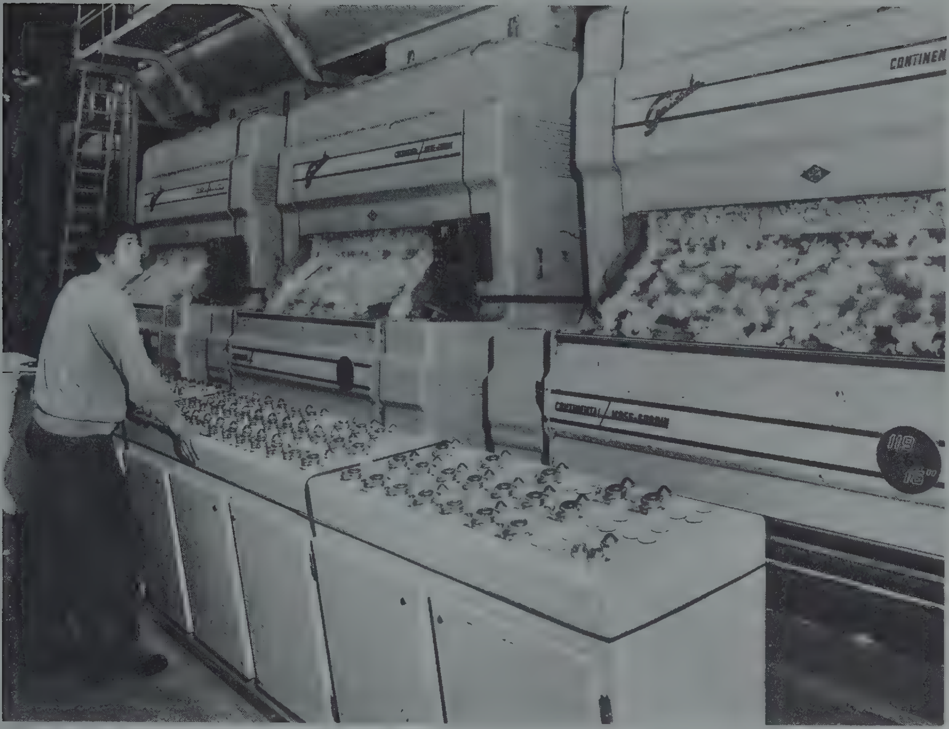


PLATE 35
Interior of a cotton gin at Wee Waa, N.S.W.

Australian Information Service

COTTON: AREA, PRODUCTION AND EXPORTS

		Seed cotton (a)				*Raw cotton export*	
Year	*Area*	*Quantity*	*Gross value*	*Cottonseed(b)*	*Lint(c)*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	'000 tonnes	'000 tonnes	$m
1977–78	41.6	131.5	61.2	72.1	44.2	9.8	10.9
1978–79	49.8	155.2	76.0	78.5	53.0	23.6	28.9
1979–80	75.0	243.7	135.3	135.8	83.2	48.5	66.9
1980–81	77.9	236.6	147.2	161.2	98.9	58.7	92.1
1981–82	92.3	324.9	182.0	219.0	134.0	79.2	117.2
1982–83p	84.3	n.y.a.	167.0	164.0	101.0	129.2	197.6

(*a*) Before ginning. (*b*) Estimated by the Bureau of Agricultural Economics. (*c*) Provided by the Raw Cotton Marketing Advisory Committee.

Sugar

Sugar cane is grown commercially in Australia along the east coast over a distance of some 2,100 kilometres in a number of discontinuous areas from Maclean in northern New South Wales to Mossman in Queensland. The geographical spread contributes to the overall reliability of the sugar cane crop and of Australia's record as a reliable sugar supplier.

Approximately 95 per cent of production occurs in Queensland, with some 75 per cent of the crop grown north of the Tropic of Capricorn in areas where rainfall is reliable and the warm, moist and sunny conditions are ideal for the growing of sugar cane. The total area of land allocated to cane growing, among the 6,500 farms in 1982–83 is 373,000 hectares. Farm sizes range between 20-70 hectares.

Australian cane farmers are regarded as amongst the most efficient in the world and employ a high degree of mechanisation in ploughing, planting, harvesting, and transportation activities. The Australian industry was the first in the world to introduce mechanical cultivation and harvesting techniques and by 1964 the entire industry had converted to bulk handling.

The cane crop is generally planted in April/May and harvested from June to December the following year. The major proportion of each year's crop is from ratoons while in New South Wales most crops are allowed to grow for two seasons due to the slower growing conditions.

The organisation of the Australian sugar industry is complex. It is subject to a degree of broad overall supervision, and legislation of, by the Commonwealth and Queensland Governments, but is largely self-governing. The price of domestic refined sugar for sale to wholesalers and manufacturers is fixed annually under a formula contained in the Sugar Agreement between the Commonwealth and Queensland Governments. The Queensland Government controls the quantity of raw sugar produced through a system of mill peaks which is translated into cane quotas for growers. In addition the Queensland Government contracts with CSR Limited and Millaquin Sugar Company Pty Limited for the refining, marketing and distribution of home consumption needs, arranges through CSR Limited the export marketing of raw sugar, and regulates the division of industry proceeds between growers and millers.

There are 33 raw sugar mills located throughout the growing regions: 30 are located in Queensland and the remaining 3 in New South Wales. Refineries are located in each mainland capital city and at Bundaberg. The six bulk sugar export terminals located in Queensland are at present capable of storing 1.91 million tonnes. While raw sugar is the main product from mills, important by-products are bagasse (fibre) molasses, ash and filter mud.

Area, production and yield levels for sugar cane from 1977-78 to 1982-83 are provided in the following table.

SUGAR CANE: AREA, PRODUCTION AND YIELD

	New South Wales					*Queensland*				
	Sugar cane cut for crushing			*Raw sugar(a)*		*Sugar cane cut for crushing*			*Raw sugar(a)*	
Year	*Area harvested*	*Production*	*Yield*	*Quantity*	*Yield*	*Area harvested*	*Production*	*Yield*	*Quantity*	*Yield*
	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha
1977 78	14.7	1,162.4	79.0	134.4	9.1	280.4	22,330.8	79.6	3,209.3	11.4
1978 79	14.1	1,321.5	94.1	152.7	10.9	237.7	20,135.5	84.7	2,748.9	11.6
1979 80	11.8	1,291.5	109.1	155.8	13.2	255.4	19,859.6	77.8	2,807.2	11.0
1980 81	14.0	1,435.3	102.4	181.2	12.9	274.3	22,540.4	82.2	3,148.5	11.5
1981 82	14.3	1,505.9	105.4	184.7	13.4	301.7	23,587.9	78.2	3,250.4	10.8
1982 83p	16.0	1,660.8	103.8	175.9	11.2	302.5	23,124.6	76.4	3,324.1	11.0

(*a*) In terms of 94 net titre.

The domestic market is reserved entirely for sugar produced in Australia. This is achieved by an embargo on the import of sugar.

Domestic sales account for about 780,000 tonnes annually or approximately twenty per cent of the total industry sales. Granulated sugars account for about 75 per cent of the total domestic sales with liquid sugars (15 per cent), castor sugar (5 per cent), and raw sugar taking up the bulk of the remainder. About two-thirds of the sales of refined sugar products go to processed food and drink manufacturers.

The Australian sugar industry sells in excess of three quarters of its annual raw sugar production to customers overseas. Sales are usually made on a c.i.f. or c and f basis. Australia is one of the world's largest sugar exporters. In 1982 Australia exported 2.50 million tonnes compared with exports from Cuba of 7.73, Brazil 2.79 and the EEC of 5.58 million tonnes (raw) respectively.

In 1982–83 the domestic market and long-term contracts with, Korea, Malaysia, Singapore, New Zealand and China provided secure outlets for approximately 50 per cent of the industry's capacity, the balance of export sugar being sold on the free market.

Failure to re-negotiate a long-term contract with Japan (previous contract expired June 1981) has resulted in increased uncertainty for long-term sales to that market, although an interim arrangement was entered into for Australia to supply 700,000 tonnes of sugar to Japan over 18 months from 1 July 1981.

The disposal pattern of Australia's sugar production is shown in the following table.

SUGAR: AREA, PRODUCTION, EXPORTS AND CONSUMPTION

		Production			*Exports*			
		Sugar cane		*Raw sugar*	*Raw and refined sugar*		*Apparent consumption in Australia(a)*	
Year	*Area harvested*	*Quantity*	*Gross value*	*Quantity*	*Quantity*	*Value f.o.b.*	*Total*	*Per head*
	'000 ha	mil. tonnes	$m	mil. tonnes	mil. tonnes	$m	'000 tonnes	kg
1977 78	295.2	23.5	420.5	3.3	2.5	536.6	704.0	49.7
1978 79	251.7	21.5	396.5	2.9	1.8	448.2	710.1	49.5
1979 80	267.2	21.5	548.2	3.0	2.2	666.9	692.5	47.7
1980 81	288.3	24.0	799.7	3.3	2.6	1,146.2	721.4	49.0
1981 82	315.9	25.1	590.2	3.4	3.4	777.7	710.8	47.2
1982 83p	318.2	24.8	484.0	3.5	4.1	562.6	n.y.a.	n.y.a.

(*a*) Total quantity of sugar available for consumption in Australia comprises refined sugar and refined sugar contained in manufactured foods.

Australia has regularly participated in arrangements to regulate the international sugar market and is a signatory to the current International Sugar Agreement (ISA) which runs until December 1984. The joint Agreement seeks to regulate the flow of sugar onto the world free market and achieve agreed price objectives through a system of export quotas and stocks. Domestic controls on the sugar industry are an important adjunct in complying with ISA conditions. In November 1982 the sugar industry was subject of a reference to the Industries Assistance Commission (IAC) for inquiry and report as to whether assistance should be provided to the Australian sugar industry and if so, the nature, extent and duration of such assistance. The IAC provided a final report on the matter in November 1983.

Vegetables

Vegetables for human consumption

The area sown to vegetables reached a peak of over 200,000 hectares in 1945, but has remained static at around 106,000 hectares since 1975–76. However, yields from most vegetable crops have increased due to variety breeding for increased yields, greater use of irrigation and better control of disease and insect pests.

Because of the wide climatic range in Australia, supplies for main city markets are drawn from widely different areas, depending on the times of maturity of the various crops. Historically, market gardens were located near urban centres and, while many small scale growers still produce crops close to city markets, urban expansion, rising urban land values, improvements in transport and irrigation and developments in freezing, canning and drying have extended the industry far from the cities. Transport costs are reduced by the location of processing establishments in producing areas, although city markets still absorb the bulk of fresh and processed produce.

Potatoes. Potatoes require deep friable soils which, in Australia, are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. While potatoes require only moderate temperatures for growth, the greatest proportion of Australia's potatoes are grown as a summer crop because potato plants are killed by heavy frosts. In recent years an increasing proportion of potatoes has been grown under irrigation and potato growing has become increasingly mechanised, with individual growers having larger areas and becoming more specialised.

Over the last two decades increases in per capita consumption have followed population increases. Consumption of processed potato products is forecast to continue to increase at the expense of the fresh product. The main processed potato products are frozen chips, crisps, dehydrated granule and flake. Other, but less important, processed potato products are soup, baby foods, salads and canned potatoes.

Potato marketing. Seventy per cent of total production is sold through fresh market outlets with the remaining 30% going to processing. The principal forms of potato processing are canning, drying and freezing. The majority of processing potatoes are purchased by the three frozen french fry potato processors who operate in Tasmania and Victoria. Processors negotiate contracts directly with growers. South Australia and Western Australia have marketing authorities which monitor production, pricing and the sale of potatoes. Other States rely on potato merchants and agents for marketing.

Potato trading. Exports of fresh potatoes, and potato flour, meal and flakes have shown an overall increase in the last decade. Imports of processed potatoes are generally insignificant.

Tomatoes. Tomatoes are grown generally for the fresh market. The major producing States are Queensland and Victoria. Processing is undertaken mainly in Victoria, New South Wales and South Australia.

Onions. Onions are grown throughout Australia with the major producing States being South Australia and Queensland. Processing is relatively insignificant.

Other Vegetables. The other major vegetables produced are carrots, cauliflowers and cabbages (mainly for the fresh market) and peas and beans (processing).

APPARENT CONSUMPTION OF VEGETABLES

(Kilograms per capita per year)

Year	*Potatoes*	*Other root and bulb vegetables*	*Tomatoes*	*Leafy and green vegetables*	*Other vegetables*	*Total, fresh equivalent weight*
1976–77	48.3	15.9	13.6	22.7	16.4	116.9
1977–78	50.4	16.9	13.1	22.5	17.7	120.6
1978–79	51.5	17.2	13.7	27.5	19.5	129.4
1979–80	54.9	17.3	14.5	25.1	17.6	129.4
1980–81	54.9	17.5	15.5	22.3	17.5	127.6
1981–82	57.6	18.7	17.0	20.6	16.9	130.8

VEGETABLES FOR HUMAN CONSUMPTION: AREA AND PRODUCTION

Year	*French and runner beans*	*Cabbages*	*Carrots*	*Cauli-flowers*	*Onions*	*Green peas*	*Potatoes*	*Tomatoes*	*Total vege-tables*
				AREA ('000 hectares)					
1977–78	7.0	2.5	3.3	2.6	3.8	13.9	36.1	8.5	105.4
1978–79	8.1	2.7	3.5	3.1	3.7	15.7	34.6	8.2	107.4
1979–80	7.1	2.5	3.6	3.3	4.0	14.5	36.7	8.5	106.5
1980–81	(a)6.3	2.4	3.7	(a)2.8	4.0	(a)10.8	35.7	9.1	103.0
1981–82	7.1	(a)2.4	3.9	3.1	4.0	12.1	(a)36.1	9.1	106.7
1982–83p	n.y.a.	n.y.a.	n.y.a.	n.y.a.	4.0	n.y.a.	(a)37.7	8.4	103.2

Year	*French and runner beans*	*Cabbages*	*Carrots*	*Cauli-flowers*	*Onions*	*Green peas*		*Potatoes*	*Tomatoes*
						Process-ing (shelled weight)	*Sold in pod (pod weight)*		
				PRODUCTION ('000 tonnes)					
1977–78	33.4	77.7	91.9	86.4	106.8	42.7	2.4	772.4	182.5
1978–79	45.0	127.6	105.0	116.4	105.2	51.4	2.4	794.6	172.6
1979–80	34.3	74.7	101.6	94.6	119.9	43.0	2.1	857.4	196.9
1980–81	(a)34.0	76.1	112.6	(a)79.2	114.8	(a)32.6	(a)1.5	865.8	216.8
1981–82	34.6	(a)71.0	112.5	85.4	127.4	38.4	1.7	(a)918.6	228.4
1982–83p	n.y.a.	n.y.a.	n.y.a.	n.y.a.	125.4	n.y.a.	n.y.a.	n.y.a.	218.0

(a) Incomplete; information on this commodity was not separately collected in some States.

VEGETABLES FOR HUMAN CONSUMPTION: VALUE OF PRODUCTION AND VALUE OF EXPORTS

Year	Gross value	Export value f.o.b.(a)
	$m	$m
1977-78	324.4	10.4
1978-79	403.4	12.5
1979-80	402.3	20.4
1980-81	509.0	23.9
1981-82	554.3	30.6
1982-83p	507.4	39.0

(*a*) Fresh, frozen, simply or otherwise preserved or prepared vegetables.

PROCESSED VEGETABLES: AUSTRALIAN PRODUCTION

('000 tonnes—unless otherwise stated)

Derived from the recorded monthly production of the Manufacturing Census

Item	1977–78	1978–79	1979–80	1980–81	1981–82	1982–83p
Quick frozen vegetables—						
Beans	17.3	25.9	16.1	19.2	22.5	16.2
Peas	34.5	46.3	38.9	35.5	47.3	42.4
Potatoes	43.6	58.2	65.8	77.9	94.3	94.8
Other	17.3	25.1	28.3	25.2	34.3	25.5
Vegetables preserved, canned or bottled (excluding pickles, etc.) (*a*)—						
Beans—Green	5.0	4.9	3.7	3.4	5.7	4.1
Baked (including pork and beans)	21.4	22.9	26.1	21.3	25.0	27.4
Beetroot	26.7	28.4	25.9	23.3	26.1	n.a.
Carrots	5.1	5.1	6.1	4.4	3.7	4.4
Cucumber (including pickled)	2.4	1.4	1.0	1.6	2.6	n.a.
Gherkins—pickled	2.1	2.2	1.9	2.3	2.2	2.0
Olives—pickled	0.5	0.6	0.3	0.5	0.5	0.5
Onions (including pickled)	3.4	3.9	4.1	4.9	3.4	3.5
Peas—Green	9.2	15.1	9.7	9.4	11.2	13.7
Tomatoes (excluding canned pulp)	13.0	11.8	13.1	15.3	15.4	9.9
Tomato juice (million litres)	8.8	7.4	9.3	7.0	8.3	4.5

(*a*) Canned in tinplate or aluminium cans; bottled in glass bottles.

For further information on vegetables *see* the following publications: *Crops and Pastures, Australia* (7321.0), *Production Bulletin No.* 3: *Food, Drink and Tobacco, Australia* (8359.0), *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Fruit (excluding grapes)

A wide variety of fruits is grown in Australia ranging from pineapples, mangoes and papaws in the tropics to pome, stone and berry fruits in the temperate regions.

Citrus fruits (predominantly oranges) are grown in all States except Tasmania and account for almost half of the production of all orchard fruits (including edible tree nuts). New South Wales and South Australia produce the greatest quantity of citrus, followed by Victoria; Queensland's production is much lower while that of Western Australia is very small. Pome fruits (apples and pears) account for about 40 per cent of orchard fruit grown in Australia. Tasmania, New South Wales and Victoria are the most important apple-growing States with significant quantities also being grown in the other States. About 80 per cent of all Australian pears are produced in Victoria. Stone fruits (peaches, apricots, plums and prunes, cherries and nectarines) account for around one-eighth of orchard fruit production. Heaviest production is in Victoria, South Australia and New South Wales, with smaller quantities in the other States. Pineapples (about 80 per cent canned) and bananas (virtually all sold fresh) are the most important tropical fruits. Queensland produces almost all the pineapples and about 46 per cent of the bananas grown in Australia. Banana production on the sub-tropical north coast of New South Wales is equivalent to that of Queensland with the remaining 8 per cent of production grown in Western Australia. Other tropical fruits grown mainly in Queensland are passionfruit, papaws, mangoes, avocadoes, custard apples and macadamia nuts. Olives are grown mostly in Victoria and South Australia. Almonds and figs are grown mainly in South Australia. Of the berry fruits, strawberries are widely grown, with heaviest production in Victoria and Queensland. Other berries (currants and raspberries) are grown predominantly in Tasmania.

SELECTED FRUIT STATISTICS

	Orchard fruit: number of trees ('000)				*Tropical, berry and other fruits: area (ha)*			
Year	*Apples*	*Oranges*	*Pears*	*Peaches*	*Bananas*	*Pineapples*	*Small, and berry fruit*	*Total area of fruit (ha)*
1977 78 . . .	5,933	5,239	1,622	1,557	7,041	6,001	995	94,126
1978 79 . . .	5,964	5,299	1,602	1,531	8,062	6,390	1,015	96,998
1979 80 . . .	6,113	5,532	1,601	1,570	8,136	6,784	1,210	98,451
1980 81 . . .	6,099	5,872	1,622	1,649	8,558	6,583	1,240	100,516
1981 82 . . .	6,065	6,055	1,703	1,669	8,740	6,373	1,494	102,068
1982 83p . . .	5,971	6,166	1,595	1,609	8,483	5,912	1,420	102,312

Year	*Apples*	*Apricots*	*Bananas*	*Cherries*	*Oranges*	*Peaches*	*Pears*	*Pine-apples*	*Plums and Prunes*
				PRODUCTION ('000 tonnes)					
1977 78 . .	258.4	24.8	97.8	7.3	356.5	62.2	108.0	98.6	18.6
1978 79 . .	344.9	31.0	113.1	6.8	368.6	64.8	127.6	105.1	28.9
1979 80 . .	298.8	26.4	125.1	(a) 3.9	392.1	71.5	124.3	123.3	(a) 15.0
1980 81 . .	306.9	30.6	124.3	6.5	424.5	79.2	145.6	123.3	20.8
1981 82 . .	294.5	27.1	129.6	5.4	376.3	64.6	(a) 109.7	125.5	16.4
1982 83p . .	n.y.a	27.2	130.6	4.3	420.8	64.4	n.y.a.	111.3	20.1
				GROSS VALUE OF PRODUCTION ($ million)					
1977 78 . .	81.3	11.0	49.7	7.9	63.4	16.6	24.6	16.1	9.4
1978 79 . .	100.1	13.5	50.8	9.3	74.1	20.6	31.7	18.4	15.3
1979 80 . .	107.7	13.9	45.9	5.8	77.9	24.0	36.5	20.2	10.6
1980 81 . .	118.9	16.9	59.5	10.0	86.0	25.7	41.4	19.8	15.2
1981 82 . .	124.2	18.1	61.4	13.2	89.6	23.0	(a) 30.8	20.5	11.2
1982 83p . .	126.3	n.y.a.	64.3	n.y.a.	n.y.a.	21.0	41.5	26.7	n.y.a.

(a) Incomplete; information on this commodity was not separately collected in some States.

Processed fruit and fruit products

After rapid expansion in the 1960s, output of canned fruit declined and then levelled off due to the effects of contracting overseas markets for Australian canned fruit. Production of natural fruit juices has increased markedly in the last decade and this has reflected improvements in marketing methods, effective promotion and public awareness of the nutritious value of natural juices.

FRUIT PRODUCTION

Derived from the Annual Manufacturing Census and the recorded monthly production

	Unit	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
Fruit juice based cordials and syrups(*a*)	mil litres	77.7	73.6	76.3	77.8	80.4	77.4
Natural fruit juice(*b*)—							
Single strength	mil litres	197.6	186.2	208.4	232.6	n.y.a	n.y.a.
Concentrated(*c*)	"	17.8	15.7	25.4	25.3	n.y.a.	n.y.a.
Cider and perry	"	11.7	14.7	17.1	15.0	n.y.a.	n.y.a.
Canned or bottled fruit (excl. canned pulp)	'000 tonnes	184.3	224.9	257.5	226.4	146.7	168.4
Jams	'000 tonnes	28.4	31.8	21.8	29.1	32.6	29.3

(*a*) Containing at least 25 per cent by volume of pure fruit juices. (*b*) Excludes fruit drinks consisting of diluted fruit juices with or without artificial flavourings. (*c*) Excludes grape must, and comprises actual quantity of concentrated juices.

APPARENT CONSUMPTION OF FRUIT

(kg per capita per year)

Year	Fresh: Oranges	Fresh: Other citrus	Fresh: Other fresh fruit	Jams, conserves, etc.	Dried tree fruit	Processed fruit	Total, fresh equivalent weight
1976–77	26.4	6.1	36.1	2.0	0.4	10.3	91.6
1977–78	29.1	6.3	33.2	1.8	0.7	10.7	91.1
1978–79	28.1	7.4	34.4	2.3	0.4	10.5	93.0
1979–80	33.8	6.4	39.3	1.5	0.6	12.4	106.1
1980–81	33.8	7.7	35.8	1.5	0.4	12.7	103.3
1981–82	32.1	7.0	40.0	1.8	0.6	10.8	104.1

Fruit exports

The value of exports of fruit and fruit products (excluding grapes) has in recent years accounted for more than a quarter of the value of the production of such fruit. Fresh or chilled fruit (mostly apples, pears and citrus) account for some 40 per cent of this; preserved fruit (mostly canned pears and peaches) make up most of the remainder; only small quantities of dried fruits (other than grapes) are exported.

Value of exports of fresh, dried and preserved fruit in recent years peaked at $90 million in 1972–73, trending downwards since that time although exports of preserved fruit showed some revival in 1976–77.

Fresh apple exports to Europe have been reduced in recent years mainly because of rising shipping costs and improved storage techniques in Europe. On the other hand, there has been some expansion to markets in other areas such as South East Asia and the Middle East. Fresh pear exports to Europe have also declined but not to the same extent as apples. Other export markets for pears have shown substantial development. Exports of citrus, predominantly oranges, have been relatively steady in recent years but are sensitive to competition from the U.S.A. Effects of the E.E.C. import regime have shown in a decrease in processed fruit exports to Europe, although the U.K. remains Australia's main market.

FRUIT EXPORTS: VALUE F.O.B.

($ million)

Year	Fresh and chilled: Apples	Fresh and chilled: Pears	Fresh and chilled: Oranges	Canned or bottled: Apricots	Canned or bottled: Peaches	Canned or bottled: Pears	Canned or bottled: Peaches and pears	Canned or bottled: Pine-apples	Canned or bottled: Fruit salad
1977–78	13.8	9.5	4.3	0.8	13.4	13.6	2.3	1.5	3.8
1978–79	15.6	15.7	5.6	0.8	12.2	17.2	1.9	1.2	4.3
1979–80	20.1	18.3	9.9	1.5	19.3	20.0	3.6	3.1	7.6
1980–81	15.3	20.0	8.0	1.3	16.0	20.6	3.0	3.5	9.6
1981–82	19.0	13.7	8.9	1.0	15.4	13.7	2.1	3.6	7.5
1982–83p	15.6	17.9	12.6	1.1	13.8	16.5	2.4	2.2	9.8

FRUIT: VALUE OF PRODUCTION AND EXPORTS

($ million)

Year	Gross value: Orchard fruit	Gross value: Tropical, berry and other	Gross value: Total	Exports(a) value f.o.b.
1977–78	246	78	324	79
1978–79	306	82	388	95
1979–80	325	82	407	131
1980–81	366	94	460	131
1981–82	365	99	464	122
1982–83p	n.y.a.	n.y.a.	499	135

(a) Fruit and nuts, excluding grapes (fresh and dried); includes fresh, dried and preserved and fruit preparations.

Fruit imports

Imports of fresh fruit are negligible, while most dried fruit imports consist of dates from Iran, China (excluding Taiwan Province) and the U.S.A. Imports of orange juice in recent years have fluctuated between 21 and 61 million litres. On average, imports of orange juice accounted for around 30 per cent of Australian requirements.

Marketing and regulation of the fruit industry

Apples and pears. The Australian Apple and Pear Corporation has the function of promoting and controlling the export of Australian apples and pears as well as the promotion of trade and commerce in apples and pears within Australia. It also has power to promote, or engage in, research relating to the production, packaging, handling, transportation or marketing of apples and pears and to promote new apple and pear products.

The Stabilization Scheme for apples, which gives support for "at risk" exports to Europe, is being phased-out over the four export seasons 1981 to 1984. The Stabilization Scheme for pears was terminated at the end of the 1980 season. Separate underwriting schemes for all exports of apples and pears have been introduced to cover the five export seasons 1981 to 1985 to protect the industry from sudden serious downturns in returns from the export of apples and pears. Under these schemes, the Government guarantees a minimum return of 95 per cent of the weighted average returns for all apple or all pear exports over the preceding four seasons. During the period stabilisation for apples is being phased out; any stabilisation payment that may be due will be reduced by the amount of any underwriting payments.

Canned Fruit. On 29 November 1979 the Commonwealth enacted legislation restructuring the industry's marketing arrangements. Similar complementary legislation has been enacted by the three major canned deciduous fruit producing States of New South Wales, Victoria and South Australia.

Under the legislation the Australian Canned Fruits Corporation (replacing the Australian Canned Fruits Board) is empowered to acquire and sell the production of canned apricots, peaches and pears and is responsible for determining prices, terms and conditions for sales in both Australian and export markets. Sales are made through markets nominated by canners and approved by the Corporation. Markets are classified as Pool and Non-Pool with returns from Pool markets equalised by the Corporation. Entitlements for sales in Pool markets are allocated to canners prior to the start of each season.

The Corporation's administrative expenses are financed by a levy imposed on the production of canned fruits under the Canned Fruits Levy Act 1979.

The Corporation is advised in the performance of its functions by the Australian Canned Fruits Industry Advisory Committee.

For further data on fruits and fruit products *see* the publications *Fruit, Australia* (7322.0), *Production Bulletin No.* 3: *Food, Drink and Tobacco, Australia* (8359.0), *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Grapes

Grapes are a temperate crop which requires warm to hot summer conditions for ripening and predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. Some of the better known wine producing areas are Sunraysia (N.S.W. and Victoria); Barossa, Clare, Riverland, Southern Districts and Coonawarra (S.A.); North Eastern Victoria and Great Western (Vic.), Hunter and Riverina (N.S.W.); Swan Valley and Margaret River (W.A.).

Nearly all the dried fruit is produced along the River Murray and its tributaries in Victoria and N.S.W. with small localised areas in other States.

VITICULTURAL STATISTICS: AREA, PRODUCTION AND VALUE

Year	*Area*		*Production: grapes used for—*			
					Total(a)	
	Bearing	*Total*	*Winemaking*	*Drying*	*Quantity*	*Gross value*
	'000 ha	'000 ha	'000 tonnes fresh weight	'000 tonnes fresh weight	'000 tonnes fresh weight	$m
1977-78	64.9	71.1	430.3	236.3	693.6	141.6
1978-79	65.8	70.6	465.6	227.1	716.4	150.1
1979-80	65.2	69.7	502.5	339.2	865.3	231.1
1980-81	64.7	69.5	473.1	248.1	743.4	204.6
1981-82	63.7	68.3	499.9	361.7	884.9	222.8
1982-83p	61.8	69.3	428.4	295.3	749.7	207.1

(*a*) Includes grapes used for table and other purposes.

The bearing area of vines fell by 6 per cent between 1978–79 and 1982–83. Area of vines not yet bearing has also decreased slightly from 1980–81 to 1981–82. Production of wine grapes has remained at around 500,000 tonnes in recent vintages, except for a reduced 1983 vintage of 428,000 tonnes due to adverse climatic conditions. Production of wine grapes has increased by over 65 per cent since 1972–73. The multipurpose grape production base has not shown much change over this period, apart from annual variations due to seasonal conditions. Multipurpose grapes are used predominantly for winemaking and drying, the latter process being particularly susceptible to any adverse seasonal conditions. There was a diversion of multipurpose grapes to winemaking during most of the past decade and this resulted in a decline in the volume of grapes dried. However, in the early 1980s, there has been some reversal in this trend, and production of dried vine fruit in 1980, 1982 and 1983, while assisted by seasonal conditions, reached higher levels than had prevailed since the late 1960s. Since the domestic consumption of dried vine fruit is stable at about 1.7 kg per head per year, variations in the quantity of grapes dried, result in variations in the quantity available for export. At the time of writing (September 1983), the world market situation was uncertain. However, larger northern hemisphere production has depressed prices in recent years and a large 1983 crop is again expected in northern hemisphere producing countries where harvest commences about the beginning of October. Trade with the European Economic Community, which has taken some 40 per cent of Australia's dried fruit exports in recent years, has been affected. by an EEC support regime for dried fruit which was complemented by a Minimum Import Price arrangement instituted in October 1982. The Australian Dried Fruits Corporation is the body responsible for the organisation of the export trade in dried vine fruits. The Corporation also administers the statutory Dried Vine Fruits Equalisation Scheme and the Dried Sultana Production Underwriting Scheme.

Varietal Statistics: 1982 Season

Varietal information relating to vines, grape production by end use and yield per hectare, is obtained in a special collection conducted at 30 June in New South Wales, Victoria, South Australia and Western Australia of all growers who reported vines in the Agricultural Census. No varietal information is collected in the other States and Territories. There is continuing research into correct identification of varieties to find out which are most suitable for different wine styles and different regions and several varieties have recently been re-named. The data are aggregated from the States of New South Wales, Victoria, South Australia and Western Australia only.

VITICULTURE: AREA AND PRODUCTION BY VARIETY, 1982 SEASON

	Area of vines at harvest			*Grubbings (actual and/or intended)*	*Production*			
					Grapes used for—			
	Bearing	*Not yet bearing*	*Total*		*wine-making*	*Drying*	*Table*	*Total*
	—hectares—			hectares	—tonnes (fresh weight)—			
Red Grapes—								
Cabernet Sauvignon . .	3,832	233	4,065	167	27,945	—	87	28,032
Currant (incl. Carina) . .	1,739	85	1,824	53	211	22,720	25	22,956
Grenache	4,527	35	4,562	396	52,353	—	188	52,541
Mataro	1,324	9	1,333	129	14,730	—	215	14,945
Shiraz	7,862	87	7,949	591	64,608	—	177	64,785
Other red grapes . . .	2,131	255	2,386	146	12,314	12	4,868	17,194
Total red grapes . .	*21,413*	*704*	*22,119*	*1,482*	*172,161*	*22,732*	*5,560*	*200,453*
White grapes—								
Chardonnay	608	630	1,238	23	4,139	—	2	4,141
Doradillo	1,811	34	1,845	155	33,841	372	167	34,380
Muscat Blanc	446	102	548	13	4,289	—	97	4,386
Muscat Gordo Blanco . .	4,222	370	4,592	96	64,153	12,991	565	77,709
Palomino and Pedro Ximenes	2,453	63	2,516	116	37,495	—	35	37,530
Rhine Riesling	3,908	811	4,719	28	33,205	—	17	33,222
Semillon	2,642	254	2,896	78	30,164	—	13	30,177
Sultana	17,546	637	18,183	202	51,042	312,257	5,871	369,170
Waltham Cross	1,428	34	1,462	31	2,762	13,536	4,549	20,847
Other white grapes . . .	5,752	820	6,572	178	66,526	42	2,831	69,399
Total white grapes .	*40,816*	*3,755*	*44,571*	*920*	*327,616*	*339,198*	*14,144*	*680,958*
Total grapes . . .	**62,231**	**4,460**	**66,691**	**2,401**	**499,777**	**361,930**	**19,704**	**881,411**

DRIED VINE FRUIT: PRODUCTION, EXPORTS AND CONSUMPTION

(Dried weight)

	Production				*Exports*				*Consumption of dried vine fruit*
							Total		
Year	*Raisins*	*Sultanas*	*Currants*	*Total*	*Raisins/ sultanas*	*Currants*	*Quantity*	*Value f.o.b.*	
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	$m	kg
1977–78 .	5.4	50.9	4.3	60.6	34.1	2.0	36.1	35.8	1.3
1978–79 .	4.7	46.4	5.5	56.6	45.6	1.9	47.5	46.9	1.7
1979–80 .	5.3	71.8	5.8	82.8	39.2	2.3	41.5	55.1	1.9
1980–81 .	5.7	50.7	4.8	61.1	50.1	1.9	52.0	75.5	1.8
1981–82 .	5.2	70.4	5.3	80.9	38.5	0.8	39.4	49.5	1.8
1982–83p	n.y.a.	n.y.a.	n.y.a.	n.y.a.	57.1	2.4	59.7	60.4	n.y.a.

Wine industry

Australia produces a wide range of wine and brandy. In recent years there has been a distinct trend towards greater production and consumption of unfortified or table wines. Until 1957–58 production of these wines (which include burgundy, claret, riesling, sauterne and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.). By 1968, however, table wine production had exceeded that of fortified wine and by 1981–82 table wines represented 83 per cent of total wine production. The Australian Wine and Brandy Corporation, which commenced operation on 1 July 1981, replacing the Australian Wine Board, is the body responsible for the control of the export trade in grape products. Like its predecessor, the Corporation has the power to regulate exports as well as promotion and publicity functions in export markets and in Australia. The Corporation has the power to trade with the approval of the Minister for Primary Industry but, to date, this power has not been invoked.

PRODUCTION, CONSUMPTION AND EXPORT OF WINES

Year	*Production*	*Exports*		*Consumption in Australia per capita*
		Quantity	*Value f.o.b.*	
	mil. litres	mil. litres	$m	litres
1977-78	339.6	4.7	5.4	14.2
1978-79	335.1	5.3	6.3	16.4
1979-80	414.2	6.1	8.4	17.3
1980-81	374.3	7.5	11.9	18.2
1981-82	402.7	8.4	14.0	19.1
1982-83p	n.y.a.	8.0	13.4	19.9

For further details on viticulture, dried vine fruit, wine, etc. *see* the following publications: *Fruit, Australia* (7322.0), *Sales and Stocks of Australian Wine and Brandy* (8504.0) and *Viticulture, Australia* (7310.0)

Miscellaneous crops

The principal crops not covered above include fodder crops, tobacco, hops, and mushrooms which, in 1981-82, had gross values as follows:

Crops	*Gross value*	*Per cent of total crop gross value*
	$m	%
Fodder crops (hay)	77.1	1.2
Tobacco	59.3	0.9
Hops	8.8	0.1
Mushrooms	21.7	0.3
Other (incl. nurseries)	178.6	2.8

Fodder crops

As well as crops specifically for grain, considerable areas of Australia are devoted to fodder crops. These crops are utilised either for grazing (as green feed), or conserved as hay, ensilage, etc.

This development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the comparatively unreliable nature of rainfall in Australian agricultural areas.

FODDER CROPS: AREA AND PRODUCTION

Year	*Hay(a)*			*Green feed or silage(b)*	
		Production			
	Area	*Quantity*	*Gross value*	*Area*	*Silage made*
	'000 ha	'000 tonnes	$m	'000 ha	'000 tonnes
1977-78	313	795	35.4	862	210
1978-79	293	955	40.2	823	335
1979-80	265	819	39.1	947	270
1980-81	320	826	58.3	1,096	338
1981-82	380	1,033	77.1	936	413
1982-83p	404	864	96.5	1,301	n.y.a.

(*a*) Principally oaten and wheaten hay. (*b*) Principally from oats, barley, wheat and forage sorghum.

FARMSTOCKS OF CEREAL GRAINS, HAY AND SILAGE

('000 tonnes)

	Cereal grains				
At 31 March	*Barley*	*Oats*	*Wheat*	*Hay*	*Silage*
1977	487	890	803	5,016	842
1978	463	819	760	3,928	709
1979	637	1,256	880	5,355	753
1980	542	1,207	815	4,872	722
1981	518	933	860	4,764	578
1982	628	1,356	832	4,941	502

Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and frost-free period of approximately five months. In Australia, all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Gunbower (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

TOBACCO: AREA, PRODUCTION AND OVERSEAS TRADE

			Exports (value f.o.b.)		*Imports (value)*	
Year	*Area*	*Production (dried leaf)*	*Unmanufactured*	*Manufactured*	*Unmanufactured*	*Manufactured*
	'000 ha	'000 tonnes	$'000	$'000	$'000	$'000
1977-78	8.5	15.1	823	7,601	38,640	24,072
1978-79	8.1	15.0	693	7,074	36,148	23,588
1979-80	7.5	15.1	4,161	9,138	42,394	25,234
1980-81	7.1	14.5	2,893	8,559	44,007	31,129
1981-82	6.6	13.3	2,080	8,551	46,268	23,187
1982-83p	6.8	n.y.a.	4,835	9,667	52,916	30,420

Marketing. In 1965 the Commonwealth and State Governments agreed to a stabilisation plan which provided for an annual Australian tobacco leaf marketing quota of flue-cured tobacco and a guaranteed minimum average reserve price. The plan is administered by the Australian Tobacco Board, constituted under the Tobacco Marketing Act 1965 and is comprised of representatives of the Commonwealth Government, tobacco-growing States, growers and manufacturers.

Following a review by the Industries Assistance Commission of the tobacco industry in 1982, the government announced a new 5 year stabilisation scheme to begin in 1984. The new scheme is designed to rationalise marketing arrangements in the industry.

Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon trellises, from which they are later harvested. The green hops are kiln-dried and baled on the farm. The dried hops can be further processed at centralised processing establishments into pellets, extract or high density packs. The pelleted form constitutes the bulk of the exported hops.

The area planted to hops in Australia is about 1,300 hectares. Nearly 60 per cent of plantings are in Tasmania (confined to the Derwent, Huon and Channel areas in the southeast, the Scottsdale-Ringarooma district in the north east, and the Gun Plains in the northwest of the state). The other hop producing areas are the Ovens and King Valleys in Victoria and a small area near Manjimup in Western Australia.

Australian hop production is about 2,100 tonnes, approximately 50 per cent of which is used by domestic breweries, with the remainder being exported.

Mushrooms

Statistics of mushroom growing were collected for the first time in all States for the year ended 30 June 1975.

MUSHROOMS: AREA, PRODUCTION, GROSS VALUE AND IMPORTS

		Total production			Imports			
					Dried		Canned or bottled	
Year	Area	Quantity	Gross value	Canned or bottled production	Quantity	Value f.o.b.	Quantity	Value f.o.b.
	hectares	tonnes	$m	tonnes	tonnes	$'000	'000 litres	$'000
1977 78	55	7,289	12.6	6,611	97	998	5,030	6,855
1978 79	53	7,806	14.7	5,718	88	964	3,738	4,723
1979 80	57	8,340	16.9	4,793	93	1,082	4,482	5,486
1980 81	56	8,265	18.5	3,743	93	1,140	5,864	7,120
1981 82	57	9,382	21.7	n.p.	120	1,478	6,413	8,454
1982 83p	n.y.a.	n.y.a.	n.y.a.	n.p.	58	895	5,845	8,447

Livestock

Since 1861, annual enumerations of livestock have been made based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia at ten-yearly intervals from 1861 to 1971, and then from 1978 on in single years, are given in the following table.

LIVESTOCK: AUSTRALIA, 1861 TO 1983

('000)

Year	Cattle	Sheep	Pigs	Year	Cattle	Sheep	Pigs
1861	3,958	20,135	351	1951	15,229	115,596	1,134
1871	4,276	41,594	543	1961	17,332	152,679	1,615
1881	7,527	62,184	816	1971	24,373	177,792	2,590
1891	10,300	97,881	891	1978	29,330	131,445	2,217
1901	8,640	70,603	950	1979	27,112	134,222	2,301
1911	11,745	98,066	1,026	1980	26,203	135,985	2,518
1921	13,500	81,796	674	1981	25,168	134,407	2,430
1931	11,721	110,568	1,072	1982	24,553	137,976	2,373
1941	13,256	122,694	1,797	1983p	22,471	133,186	2,498

While livestock numbers (particularly sheep) have increased substantially since 1861, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia.

Australia has suffered nine major widespread droughts since the keeping of rainfall records began:

1864–66 All States were affected except Tasmania.
1880–86 Southern and eastern mainland States were affected.
1888 All States were hit except Western Australia.
1895–1903 This drought, one of the worst on record, halved Australia's sheep population (originally 100 million) and cut cattle numbers (12 million) by 40 per cent.
1911–1916 Wheat crops were affected in most States, sheep numbers declined by 19 million and cattle by 2 million.
1918–1920 During this period parts of Western Australia were the only areas completely free from drought.
1939–1945 This prolonged drought affected crops and/or pastoral areas in all States. Sheep numbers fell from 125 million in 1942 to 96 million in 1945.
1965–1967 This drought, in its impact on Queensland, New South Wales and Victoria, ranked with the 1902 drought as one of the most severe on record. It resulted in a 40 per cent drop in the wheat harvest, a loss of 20 million sheep, and a decrease in farm income of $300-500 million. There was a chain reaction to other industries, with heavy losses being suffered by manufacturers of farm machinery, and the N.S.W. Railways. Effects of the drought were worsened by water rationing in irrigation areas.
1972 Widespread drought occurred throughout Australia.

Much of eastern Australia experienced one of the worst droughts on record in 1982 and early 1983. Widespread and soaking rains during the autumn months of 1983 greatly alleviated the situation and by late 1983 only pockets of drought remained. Tasmania remains the worst affected State, but drought declarations are expected to be lifted soon in most areas.

For further details of droughts in Australia *see* Yearbook No. 54, pages 991-96 *'Droughts in Australia'* and the Bureau of Meteorology's 'Commentary on Meteorological aspects of the current drought' issued in September 1982.

The years in which the numbers of livestock attained their peaks are as follows: cattle, 1976 (33,434,000); sheep, 1970 (180,080,000); and pigs, 1973 (3,259,000).

Cattle

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of dairy herds. While dairy cattle are restricted mainly to southern and to coastal districts, beef cattle are more widely distributed. Cattle numbers in Australia increased slowly during the 1960s and 1970s, despite seasonal vicissitudes and heavy slaughterings, to a peak of 33.4 million in 1976. Since then, there has been a continuous decline, aggravated by drought conditions, to 22.5 million in 1983.

Beef cattle production is often combined with cropping, dairying and sheep. In the north (north of the 26th parallel), cattle properties and herd size are very large, pastures are generally unimproved, fodder crops are rare and beef is usually the only product. The industry is more intensive in the south because of the more favourable environment including more improved pasture.

For further details on cattle *see Livestock and Livestock Products, Australia* (7221.0).

CATTLE NUMBERS

('000)

31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust. (incl. A.C.T.)*
1978 . . .	7,330	4,572	11,490	1,242	2,271	733	1,674	29,330
1979 . . .	6,484	4,134	10,859	1,086	2,092	657	1,785	27,112
1980 . . .	6,097	4,252	10,332	1,067	2,065	649	1,727	26,203
1981 . . .	5,459	4,313	9,925	1,091	2,034	659	1,675	25,168
1982 . . .	5,429	4,121	9,782	1,013	1,942	628	1,624	24,553
1983p . . .	4,940	3,463	9,328	843	1,751	565	1,571	22,471

Classification of cattle

CATTLE NUMBERS, BY AGE, SEX, PURPOSE

('000)

	31 March					
Classification	*1978*	*1979*	*1980*	*1981*	*1982*	*1983p*
Milk cattle—						
Bulls used or intended for service	60	55	56	54	49	47
Cows, heifers and heifer calves	2,902	2,733	2,697	2,672	2,661	2,644
House cows and heifers	99	78	77	74	73	70
Total, dairy cattle	*3,062*	*2,867*	*2,830*	*2,799*	*2,783*	*2,761*
Meat cattle—						
Bulls used or intended for service	571	544	545	533	527	499
Cows and heifers (1 year and over)	12,728	11,774	11,727	11,269	11,032	9,903
Calves under 1 year	6,513	5,837	5,445	5,135	5,023	4,658
Other cattle (1 year and over)	6,456	6,090	5,656	5,431	5,188	4,650
Total, beef cattle	*26,268*	*24,245*	*23,373*	*22,368*	*21,770*	*19,710*
Total, all cattle	**29,330**	**27,112**	**26,203**	**25,168**	**24,553**	**22,471**

Sheep

With the exception of a short period in the early eighteen-sixties, when the flocks in Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising. Western Australia is the second largest sheep raising State followed by Victoria. Sheep numbers reached a peak of 180 million in Australia in 1970. They then declined rapidly up to March 1973 as producers turned off large numbers for slaughter and moved from wool-growing towards grain and beef production. By 1975, the numbers had again increased to 151,653,000, but in March 1978 the numbers had fallen to 131,442,000, the lowest since 1955. Improved seasonal conditions during 1978 and 1979 enabled producers to begin rebuilding their flocks. By March 1980, numbers had risen to 136.0 million. Subsequently, high levels of drought-induced slaughter led to a decline in numbers to 134.4 million by March 1981. Numbers rose to 138.0 million in March 1982 with improved seasonal conditions and the attractiveness of sheep enterprises relative to cattle contributing to the growth in numbers. Subsequently, drought conditions saw the flock reduce to 133.2 million in March 1983.

SHEEP NUMBERS
(Millions)

31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. (incl. N.T., A.C.T.)*
1978	48.0	22.0	13.4	14.1	29.8	4.0	131.4
1979	48.4	22.8	13.6	14.9	30.3	4.2	134.2
1980	48.6	24.4	12.2	16.0	30.4	4.2	136.0
1981	46.0	25.5	10.6	17.1	30.8	4.4	134.4
1982	48.7	25.3	12.3	16.7	30.3	4.5	138.0
1983p	48.0	22.7	12.1	15.5	30.2	4.5	133.2

SHEEP, BY AGE AND SEX
(Millions)

	Sheep: 1 year and over				*Lambs and hoggets (under 1 year)*	*Total, sheep and lambs*
31 March	*Rams*	*Breeding ewes*	*Other ewes*	*Wethers*		
1978	1.7	63.6	5.4	32.6	28.2	131.4
1979	1.7	65.9	4.7	31.6	30.4	134.2
1980	1.7	66.5	5.0	30.5	32.3	136.0
1981	1.8	66.9	4.8	30.1	30.8	134.4
1982	1.8	68.5	4.8	30.5	32.4	138.0
1983p	1.7	65.8	5.4	28.7	31.5	133.2

In 1981-82 provisional value of production data for the sheep and wool industry showed that the combined value of wool and sheep slaughtered accounted for about one-fifth the gross value of all agriculture. This proportion varies with wool and meat prices and seasonal conditions. Australia has about 15 per cent of the world's woolled sheep but produces around 25 per cent of the world's greasy wool output. In addition, in 1982-83 the sheep industry produced over half a million tonnes of mutton and lamb, a big decrease from the record production of 956,000 tonnes in 1971-72, which resulted from high slaughtering rates linked to very low wool prices prevailing at the time. Since 1973-74 there has been a strong growth in exports of live sheep for slaughter, exports reaching a record 6.9 million head in 1982-83.

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS
(Millions)

Year ended 31 March	*Number at beginning of season*	*Lambs marked*	*Live sheep exports*	*Sheep and lambs slaughtered(a)*	*Estimated deaths on farms(b)*	*Number at end of season*
1978	135.4	39.5	4.2	30.1	9.1	131.4
1979	131.4	42.5	3.7	26.9	9.1	134.2
1980	134.2	45.8	5.3	30.2	8.5	136.0
1981	136.0	43.7	6.1	31.4	7.8	134.4
1982	134.4	44.8	6.3	28.1	6.8	138.0
1983p	138.0	45.6	6.4	30.2	13.9	133.2

(*a*) Comprises statistics from abattoirs and other major slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers; also includes animals condemned or those killed for boiling down. (*b*) Balance item.

LAMBING

Year ended 31 March	*Number of breeding ewes at start of season*	*Mating intentions at start of season*	*Actual matings*	*Ratio of actual matings to intended matings*	*Lambs marked*	*Ratio of lambs marked to actual matings*	*Ratio of lambs marked to breeding ewes*
	million	million	million	per cent	million	per cent	per cent
1978	64.7	59.8	56.6	95	39.5	70	61
1979	63.6	58.5	57.1	98	42.5	74	67
1980	65.9	61.9	59.5	96	45.8	77	70
1981	66.5	60.3	58.1	96	43.7	75	66
1982	66.9	61.9	60.5	98	44.8	74	67
1983p	68.5	64.6	61.3	95	45.6	74	67

For further details on sheep, *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Pigs

Until the early 1950s the majority of pigs were reared in dairy areas where the on-farm separation of cream, associated with butter production, provided an abundant supply of skim milk; a traditional cheap and nutritious pig feed. With the virtual disappearance of on-farm cream separation and the introduction of wheat delivery quotas and generally low grain prices in the late 1960s, pig raising became increasingly associated with grain growing areas. Today most pigs are raised under intensive or semi-intensive conditions in large scale piggeries and fed on grain based rations. Pig numbers have remained fairly stable over the past decade, although there has been a decrease in the number of holdings raising pigs as pig production becomes more specialised.

PIG NUMBERS
('000)

31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. (incl. N.T., A.C.T.)*
1978	737	401	463	311	237	64	2,217
1979	759	390	487	330	271	61	2,301
1980	829	422	510	398	293	63	2,518
1981	787	400	502	394	289	54	2,430
1982	766	406	513	374	263	47	2,375
1983p	800	406	537	405	300	49	2,498

For further details on pigs *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Poultry

Once part of the mixed farming sector, the poultry industry is now a highly specialised and distinct industry. The bulk of egg production is obtained from this commercial source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic egg needs. Some supplies from this source are also marketed. Because the data from this latter sector is incomplete, total poultry numbers for Australia are not available. There is an increasing tendency for specialisation within the industry into hatcherymen, egg producers and broiler producers. There are also separate research schemes funded jointly by industry and government for the egg and meat chicken industries but close liaison exists. Both sectors are good examples of the general movement towards specialised, large scale, capital-intensive production which is common to many agricultural industries.

POULTRY NUMBERS(*a*)
('000)

	Chickens			Other poultry			
31 March	*Hens and pullets for egg production*	*Meat strain chickens (broilers)*	*Total chickens(b)*	*Ducks*	*Turkeys*	*Other poultry*	*Total all poultry*
1978	15,773	26,681	42,637	163	322	330	43,452
1979	16,189	26,825	43,214	247	448	321	44,229
1980	14,846	29,967	46,749	272	1,016	218	48,255
1981	15,187	29,077	46,386	228	750	175	47,539
1982	14,930	27,478	44,761	317	713	213	46,004
1983p	14,624	27,558	44,353	450	577	176	45,556

(*a*) Data are for numbers of poultry on agricultural establishments as reported in the annual Agricultural Census. (*b*) Includes breeding stock and data not available for separate publication.

For further details on poultry *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Meat production, slaughterings and other disposals

The ABS collects details of slaughterings and meat production from abattoirs, commercial poultry and other slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughterings for human consumption and do not include animals condemned or those killed for boiling down.

PRODUCTION OF MEAT BY TYPE(*a*)
('000 tonnes)

	Carcass weight						Dressed weight(b)	
Year	*Beef*	*Veal*	*Mutton*	*Lamb*	*Pig meat*	*Total meat*	*Chickens*	*Total all poultry(c)*
1977–78	2,080	104	261	253	199	2,897	220	246
1978–79	1,948	71	239	253	199	2,708	244	271
1979–80	1,510	54	275	272	218	2,330	282	313
1980–81	1,418	50	299	279	233	2,278	276	303
1981 82	1,523	50	230	276	228	2,307	253	279
1982–83p	1,482	62	246	271	234	2,297	274	304

(*a*) Excludes offal. (*b*) Dressed weight of whole birds, pieces and giblets. (*c*) Includes other fowls, turkeys, ducks and drakes.

PRODUCTION OF MEAT : AUSTRALIA, 1931-32 TO 1982-83

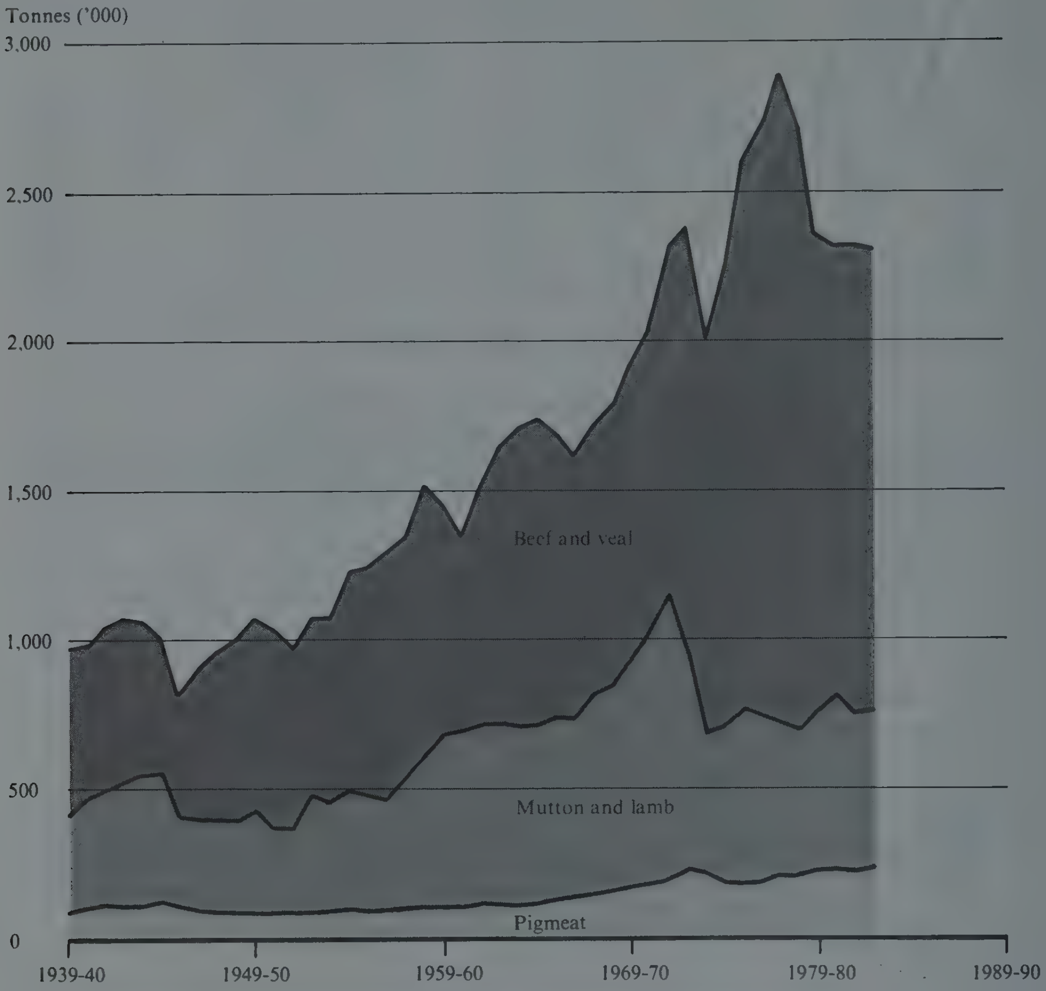


PLATE 36

NUMBERS OF LIVESTOCK AND POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION
(Million head)

Year	*Cattle*	*Calves*	*Sheep*	*Lambs*	*Pigs*	*Chickens (a)*	*Other fowls (b) and turkeys*	*Ducks and drakes*
1977 78	10.4	2.5	13.8	15.3	3.7	174.7	10.7	1.7
1978 79	9.5	1.8	12.0	14.8	3.6	191.2	10.8	1.8
1979 80	7.4	1.5	14.1	16.5	3.9	222.5	11.3	2.2
1980 81	7.0	1.5	15.2	16.7	4.2	221.7	11.2	1.7
1981 82	7.2	1.5	11.7	16.3	4.1	204.0	9.9	2.0
1982 83p	7.3	1.7	12.9	16.5	4.1	220.0	10.7	1.9

(*a*) Comprises broilers, fryers and roasters. (*b*) Comprises hens, roosters, etc.

Mutton and Lamb

Production of sheepmeats in Australia is closely associated with the wool industry. Sheep grazing often occurs on mixed farms in conjunction with beef and/or grain enterprises and in some areas producers specialise in lamb production. The supply of sheepmeat depends greatly on seasonal conditions, decisions to build up or reduce flock numbers, expectations of wool prices, live sheep exports and the pattern of domestic consumption of meat.

There was a movement out of sheep raising in Australia early in the 1970's principally as a result of low wool prices and many producers diversified into cattle and grains. Flock numbers declined from a peak of 180 million in 1970 to a low of 131 million by 1978. After 1978, wool and sheepmeat prices improved and the trade in live sheep for slaughter overseas continued to expand. As a result the national flock size increased slightly to 136 million by March 1980. Since March 1980, flock numbers have fluctuated as a result of climatic and market conditions peaking at 138.0 million in March 1982, before dropping to 133.2 million in March 1983.

Sheepmeat production declined rapidly from the high levels of the early 1970s, which were associated with flock reduction, to annual levels of between 400,000 and 600,000 tonnes from 1973–74. Lamb production has remained close to 270,000 tonnes per year in recent years, while mutton production has varied greatly between 215,000 tonnes and 270,000 tonnes.

A high proportion of lamb is consumed in Australia with per capita consumption remaining steady at about 14-16 kilograms per year. A high proportion of mutton produced is exported. Australia is the world's largest exporter of mutton, with Japan and the Middle East being the main markets.

Live sheep exports for slaughter have increased from almost one million head in 1973–74 to nearly 7 million in 1982–83, equivalent to 24,000 tonnes of carcass mutton in 1973–74 and 173,000 tonnes in 1982–83 and representing 44% of all carcass sheep meat (lamb, etc.) exported in 1982–83.

Beef and Veal

The cattle industry is very dependent on international trade in beef and is subject to great fluctuations. Over half of Australia's beef and veal production is exported, with the U.S.A., Japan and South Korea currently the main outlets.

Beef and veal production in Australia rose markedly in the seventies, reaching peak levels of over 2 million tonnes in 1977–78 and 1978–79, but declining to 1.5 million tonnes in 1982–83. The increase in production followed the rapid expansion of the beef herd that had occurred during the late sixties and early seventies mainly in response to relatively profitable beef prices and increased demand from overseas markets.

In the mid 1970's, poor economic conditions and heavy domestic supplies of beef in major importing countries led them to impose severe restrictions on their imports. With reduced international demand and heavy supplies in Australia, saleyard prices fell greatly and remained low for about four years. The depressed conditions were accompanied by a severe reduction in the national herd.

Improved seasonal conditions during 1983, accompanied by strengthening overseas demand, resulted in a move towards herd rebuilding. However, the high level of drought induced slaughterings during 1982 had reduced the breeding herd base implying very slow herd expansion until 1986. Accordingly, beef and veal production will decline throughout the eighties.

Pigmeat

Specialisation has given producers greater opportunity to concentrate on the quality of their product. Pigmeat production has risen steadily since 1975 to reach 234,000 tonnes in 1982–83. Average slaughter weights have also risen over the past ten years, reflecting the increased quantities of pigmeat going to canning and curing and the expanding sales of heavier pigs (between 50 and 70 kilograms) for the fresh pork trade.

Approximately 65 per cent of production is processed into bacon, hams and smallgoods, the rest is sold as fresh pork. Slightly over 1 per cent of the industry's output is currently exported. The increasing production of pigmeat therefore reflects a steady increase in per capita domestic consumption over the past five years.

Poultry meat

The poultry meat industry has developed rapidly since 1970 and both output and consumption have risen steeply. Genetic and technical improvements and the organisation of the industry into large-scale enterprises have raised efficiency and helped to reduce production costs relative to other meats. The price competitiveness of chicken meat compared with other meats, especially beef, continues to improve consolidating the position of poultry meat as the second most important meat after beef in Australian diets.

EXPORTS OF FRESH, CHILLED OR FROZEN MEAT

Year	Beef	Veal	Mutton	Lamb	Pork	Poultry
			QUANTITY (*a*) ('000 tonnes)			
1977-78	1,095.5	19.8	199.0	57.0	1.3	5.6
1978-79	1,193.7	23.0	169.2	46.5	1.9	6.7
1979-80	846.6	17.4	182.1	49.6	1.9	7.3
1980-81	753.7	13.6	241.5	39.4	2.4	7.7
1981-82	775.2	8.5	154.6	32.1	1.5	4.1
1982-83p	861.8	10.1	201.0	36.9	1.8	5.4
			VALUE f.o.b. ($ million)			
1977-78	853.7	18.1	123.7	57.2	2.2	6.6
1978-79	1,339.2	26.6	135.2	52.0	3.1	8.0
1979-80	1,295.6	31.9	172.6	62.4	3.7	10.6
1980-81	1,086.4	22.9	248.2	62.3	5.7	12.1
1981-82	1,009.8	14.4	155.3	50.7	3.1	7.3
1982-83p	1,266.6	17.8	167.0	61.1	2.2	4.4

(*a*) Quantity data on beef, veal, mutton and lamb exports are shown in carcass weight equivalents.

Exports of live animals

During the 1970's exports of live sheep to the Middle East for slaughter have substantially increased from 762,000 in 1971-72 to 6.8 million in 1982-83. Over the last five years a substantial trade in cattle for slaughter has developed, primarily with Asian countries. Exports of breeding cattle especially had picked up substantially in the two years prior to 1982-83 but have since fallen drastically due to reduced exports to Indonesia, which had previously accounted for over 60 per cent of total exports. Export of cattle for either breeding or slaughter purposes had fallen from 109,900 head in 1981-82 to 81,800 head in 1982-83.

For details of the regulation governing the export (and import) of live animals *see* Year Book No. 61 page 848.

EXPORTS OF LIVE ANIMALS

	Livestock			*Poultry*		
		Total(a)			*Total*	
Year	*Sheep and Lambs*	*Number*	*Value f.o.b.*	*Day old chicks*	*Number*	*Value f.o.b.*
	—'000—		$'000	—'000—		$'000
1977-78	4,124	4,188	98,069	503	584	387
1978-79	3,865	3,955	110,611	448	624	626
1979-80	6,162	6,225	192,668	409	710	747
1980-81	5,740	5,842	208,483	862	974	832
1981-82	6,009	6,112	214,886	809	935	720
1982-83p	7,004	7,097	212 950	370	497	661

(*a*) Also includes cattle, calves, buffaloes and pigs.

PRODUCTION AND EXPORT OF BACON, HAM AND CANNED MEAT

	Production			*Exports*			
	Bacon and ham(a)			*Bacon and ham(c)*		*Canned meat(d)*	
Year	*Bone-in*	*Bone-out*	*Canned meat(b)*	*Quantity*	*Value*	*Quantity*	*Value*
	tonnes	tonnes	tonnes	tonnes	$'000 f.o.b.	tonnes	$'000 f.o.b.
1977-78	15,746	49,030	49,347	539	1,479	24,643	35,660
1978-79	18,545	51,682	44,775	564	1,734	25,202	45,197
1979-80	18,147	52,811	39,178	861	2,734	21,581	51,552
1980-81	18,878	55,564	36,431	528	1,991	17,400	42,139
1981-82	18,112	57,818	34,619	523	1,959	19,651	50,461
1982-83p	17,051	55,634	n.a.	515	2,292	20,150	53,987

(*a*) Production of bacon and ham 'on the bone' is shown in terms of 'bone-in' weight, while production of boneless bacon and ham is shown in terms of 'bone-out' weight. Production of canned bacon and ham, which is reported in terms of 'stated net weight of packs', is included in the 'bone-out' category. (*b*) Canned weight. Includes bacon, ham and meat and vegetables, but excludes rabbit, poultry and baby foods. (*c*) Cured carcass weight of smoked or cooked bacon and ham. Includes 'stated net weight of packs' of canned bacon and ham. (*d*) Canned weight; excludes canned bacon and ham.

GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(*a*)
($ million)

Year	*Cattle and calves*	*Sheep and lambs*	*Pigs*	*Poultry*	*Total*
1977-78	1,176.9	344.8	212.7	220.0	1,954.4
1978-79	2,154.6	445.1	253.8	244.2	3,097.7
1979-80	2,386.0	654.3	311.3	307.2	3,658.8
1980-81	2,056.5	718.9	337.5	361.4	3,474.3
1981-82	1,890.1	646.7	396.1	362.7	3,295.6
1982-83p	1,984.9	454.2	412.4	414.4	3,265.9

(*a*) Includes adjustment for net exports of live animals.

Consumption

Owing to diverse cutting practices by butchers and because of the difficulty of clearly defining the term 'retail weight of meat', it is considered impractical to derive a satisfactory factor for the purpose of expressing estimated meat consumption in terms of retail weight. Depending on cutting practices employed and whether or not bones, etc. sold to customers are included in retail weight of meat, the following retail weights as a proportion of carcass weight are generally acceptable: beef, 60 per cent to 75 per cent; mutton and lamb, 80 per cent to 95 per cent; pork 90 per cent to 95 per cent.

APPARENT CONSUMPTION OF MEAT AND MEAT PRODUCTS AS HUMAN FOOD

Year	*Beef and veal*	*Mutton*	*Lamb*	*Pigmeat(a)*	*Bacon and ham*	*Canned meat*	*Poultry meat*
			TOTAL ('000 tonnes)				
1977-78	964	52	195	65	86	25	240
1978-79	795	66	202	55	93	21	271
1979-80	677	73	229	69	91	21	295
1980-81	663	73	238	83	100	22	301
1981-82	743	53	245	87	95	18	288
1982-83p	640	69	235	87	n.y.a.	n.y.a.	301
			PER CAPITA PER YEAR (kg)				
1977-78	67.5	3.7	13.7	4.5	6.0	1.7	16.8
1978-79	55.1	4.5	14.0	3.8	6.5	1.4	18.8
1979-80	46.4	5.0	15.7	4.8	6.3	1.4	20.2
1980-81	44.7	4.9	16.0	5.6	6.8	1.5	20.3
1981-82	49.4	3.5	16.3	5.8	6.3	1.2	19.1
1982-83p	42.2	4.5	15.5	5.7	n.y.a.	n.y.a.	19.9

(*a*) Comprises pork and includes smallgoods and estimates for trimmings from baconer carcasses.
NOTE: Beef, veal, mutton, lamb and pigmeat are expressed in terms of carcass weight, bacon and ham in cured carcass weight, canned meat in canned weight and poultry meat in dressed weight.

For further details on meat production and slaughtering *see* the following publications: *Livestock and Livestock Products, Australia* (7221.0), *Value of Agricultural Commodities Produced, Australia* (7503.0) and *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

Australian Meat and Live-stock Corporation

Legislation was enacted to establish the Australian Meat and Live-stock Corporation from 1 December 1977. The Corporation, which regulates and promotes the export of both meat and live-stock and the promotion of domestic consumption, replaced the Australian Meat Board.

The Corporation has the power to trade in meat and live-stock in a manner which accords with its adopted policy and with normal commercial practice. An amendment to the Act, passed in 1982 but yet to be proclaimed, extends the powers of the Corporation, subject to the approval of the Minister, to engaging in sole trading or to permitting restricted trading by a specified holder or holders of meat or live-stock licences and entering into transactions by way of meat futures or live-stock futures contracts. The exercise of this sole or restricted trading power, is limited to circumstances where a monopoly buying power is, in the Corporation's opinion, distorting normal market forces, and to circumstances where such action is necessary or desirable to ensure that live-stock producers receive a fair return in respect of meat or live-stock exported.

Statutory arrangements provide for three industry consultative groups to serve as a link between the Corporation and relevant industry interests: the Meat Exporters and Abattoir Operators Consultative Group, the Live-stock Exporters Consultative Group and the Live-stock Producers Consultative Group. These groups:

- advise the Corporation on trade and market matters; and
- disseminate information on Corporation decisions and policies to people engaged in the meat and live-stock industries.

The Corporation's main functions are to encourage, assist, promote and control the export of meat and live-stock from Australia, and to promote the consumption and sale of Australian meat, and the sale of Australian live-stock, both in Australia and overseas. Exporters of meat and live-stock are licensed by the Corporation and have to comply with its requirements in relation to export trading. The Corporation assists exporters in overseas market development and conducts meat promotion activities in Australia and abroad. It has authority, also, to perform a wide range of other functions aimed at improving the production of meat and live-stock and for the general benefit of the meat and livestock industries.

Wool

The Australian Sheep Flock contains nearly 12 per cent of the world's sheep, and produces over 26 per cent of the total annual production of wool. Approximately 75 per cent of the Australian Flock are of a single breed, the Merino, raised primarily for its heavy fleeces of fine quality wool.

Wool production

Wool as shorn from the sheep ('greasy wool') contains an appreciable amount of grease, dirt, vegetable matter and other extraneous material other than the clean wool fibre. The exact quantity of these impurities in the fleece varies between countries, differing climatic and pastoral conditions, with seasonal fluctuations and with the breed and condition of the sheep. It is, however, the clean wool fibre that is ultimately consumed by the textile industry and the term 'clean yield' is used to express the net wool fibre content present in greasy wool.

Since the 1946-47 season, the average clean yield of Australian wool has been assessed annually. This work was initiated by the former Australian Wool Realisation Commission and is carried on by the Australian Wool Corporation. In the early years, the average clean yield was assessed on the basis of a small number of tests and subjective appraisal while in later years an increasing proportion of the Australian wool clip has been subjected to laboratory tests. During the period of assessment the clean yield showed a continuous rise up to 1951–52, when it reached 57.5 per cent. It was 62.32 per cent in 1982–83.

Wool scoured and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because much of the greasy wool treated locally for export in this form is dirty low-grade wool. The quantity of scoured and carbonised wool exported during 1982-83 was about 9 per cent of total raw wool exports in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The following table shows details of total wool (i.e. shorn, dead, fellmongered, and exported on skins) as well as the numbers of animals shorn, the average fleece weight and the gross value of the wool. A graph showing the production of wool in relation to the number of sheep appears on Plate 37.

SHEEP NUMBERS AND WOOL PRODUCTION : AUSTRALIA, 1880 TO 1983

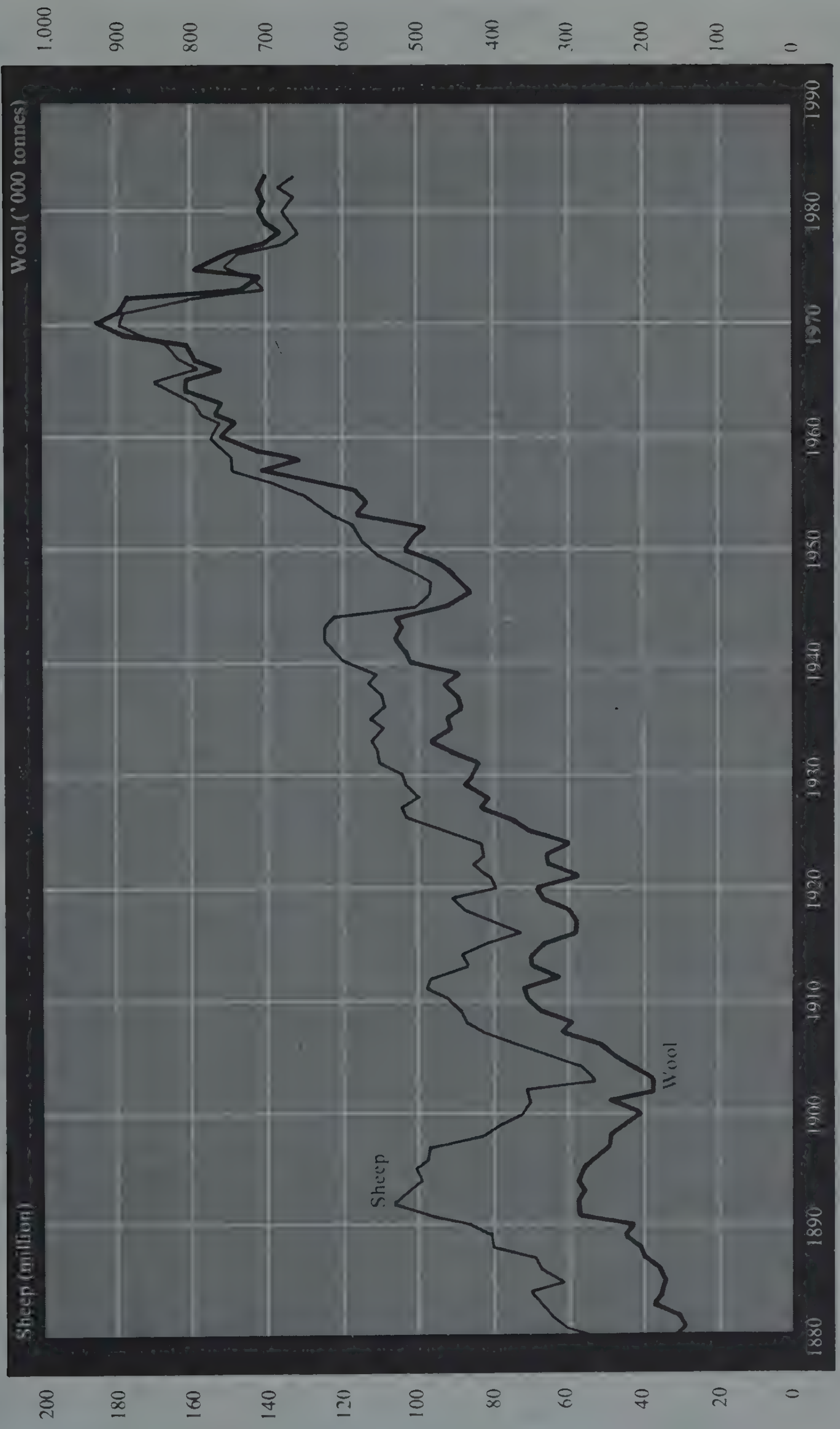


PLATE 37

SHEARING, WOOL PRODUCTION AND VALUE

			Wool production			
					Total wool	
Year	Sheep and lambs shorn	Average fleece weight	Shorn wool	Other wool(a)	Quantity	Gross value (b)
	million	kg	'000 tonnes	'000 tonnes	'000 tonnes	$m
1977-78	143.5	4.22	605.5	71.6	677.0	1,206
1978-79	146.9	4.38	643.6	60.6	704.3	1,374
1979-80	148.5	4.33	642.4	66.1	708.5	1,651
1980-81	150.0	4.25	637.9	63.3	701.2	1,670
1981-82	155.2	4.26	660.9	56.2	717.2	1,670
1982-83p	149.9	4.26	638.0	62.3	700.3	1,789

(*a*) Comprises dead and fellmongered wool, and wool exported on skins. (*b*) Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

The wool market

The principal method used by wool growers in selling their wool is through public auction. Individual wool growers consign their clips to one of a number of wool selling brokers who arrange for it to be stored, samples to be taken for laboratory specification, and make arrangements for the wool to be valued and offered at a rostered sale.

It is at such sales that the Corporation provides Reserve Price Support. The proportion of the clip sold at auction varies from year to year but is in the order of 80 per cent of all wool grown. For the remaining 20 per cent, a transaction price is agreed between buyer and seller and the sale concluded without the presence of other parties and without the protection of the Reserve Price Scheme. This selling option has greatest following in Western Australia while New South Wales and Victoria are also strong supporters of this selling system.

Wool receivals

Under the terms of the Wool Tax Act, all growers pay a tax on the gross value of first hand wool sales, to provide financial backing for wool promotion, research and the operation of a statutory reserve price scheme. The ABS collects details of the total amounts of taxable wool received by wool selling brokers and dealers each year. These figures exclude wool received by brokers on which tax had already been paid by other dealers (private buyers) or brokers.

TAXABLE WOOL RECEIVALS

	Receivals				
Year	Brokers (NCWSB)	Dealers(a)	Brokers and dealers	Dealers as per cent of total receivals	Shorn wool production(b)
	—'000 tonnes—			per cent	'000 tonnes
1977-78	459.7	155.2	614.9	25.2	605.5
1978-79	481.4	164.8	646.2	25.5	643.6
1979-80	483.1	175.2	658.2	26.6	642.4
1980-81	523.8	134.2	658.0	20.4	637.9
1981-82	539.0	141.4	680.4	20.8	660.9
1982-83p	518.9	141.2	660.2	21.4	638.0

(*a*) Includes brokers who are not members of the National Council of Wool Selling Brokers of Australia (NCWSB). (*b*) Obtained from the annual Agricultural Census.

Wool marketing arrangements

The Australian Wool Corporation (AWC), established on 1 January 1973 through the amalgamation of the former Australian Wool Commission and Australian Wool Board, performs a number of functions within the market aimed at encouraging the demand for Australian wool and assisting the efficient and orderly disposal of the national clip. Central to these activities is a reserve price scheme, operated by the Corporation on behalf of the woolgrowing industry and with the support of the Commonwealth Government. This scheme was introduced with the formation of the Australian Wool Commission in November 1970. Its purpose is to provide a measure of protection to wool growers against unduly low prices resulting from temporary variations of demand at auctions.

The reserve price scheme has two component parts, a fixed and published 'floor' price for each wool type, and a flexible or floating reserve which is not disclosed.

Initially, the reserve price scheme was operated on a flexible basis whereby the Commission, and later the Corporation, bought wool which failed to reach a reserve price determined on a day-to-day basis. Since September 1974, as part of the reserve price program, the Corporation has been authorised to operate a floor price scheme. Under the floor price arrangements the Government sets a minimum average price for wool at the beginning of each season. The Corporation sets minimum prices for each wool type based on the Government's indicator floor price and purchases wool at auction which does not attract bids above the level of the appropriate floor price for that type. The Corporation continues to operate a flexible reserve price scheme above the level of the floor price to prevent 'pot-holes' in the market. The wool purchased by the Corporation is held in stock, some of it in Australia and some overseas, and sold when prices improve with a view to stabilising the market.

In order to finance losses arising from the Corporation's reserve price activities woolgrowers have since September 1974, been paying 5 per cent of gross proceeds from the sale of wool into a special fund called the Market Support Fund.

When the Fund was established, wool demand was extremely depressed. However, the market improved in subsequent years and the level of the Fund rose to about $493 million at the end of 1980-81. This balance was well in excess of requirements and the Government agreed to woolgrowers' strong requests for legislation to allow for a progressive return of contributions paid into the Fund. In June 1981, the Minister for Primary Industry declared 1974-75 to be the first such refund period and almost $42 million of the available $43.6 million paid into the Fund in 1974-75 was refunded to woolgrowers during 1981-82. By June 1983 an amount of $44.1 million paid into the fund in 1975-76 was refunded to woolgrowers. It is expected that $56.1 million paid into the fund in 1976-77 will be available for refunding to woolgrowers in 1983-84.

The Australian Wool Corporation has other responsibilities which include participation in negotiations in respect of freight rates, administration of wool stores and the encouragement of greater efficiency within the existing wool marketing system.

To provide direct experience with all aspects of wool handling and marketing and demonstrate cost savings and handling efficiencies, the Corporation began a Wool Marketing Service (WMS) to growers in July 1980 on a trial basis. It was approved by the Minister for Primary Industry as a permanent service in July 1982.

In operation, the Wool Marketing Service purchases wool direct from growers with the valuation based on full laboratory measurement. The wool is then prepared for re-sale and shipment by the Corporation in a variety of ways, though the auction system remains the principal selling option.

Wool testing

The Australian Wool Testing Authority has been in existence since 1957 but its role has become more prominent since the introduction, in 1971, of wool valuation techniques relying on objective specification of wool's main physical characteristics. From the first sales of wool in this manner in the early 1970's this technique has achieved universal acceptance and now more than 90 per cent of all wool sold at auction is accompanied by certified measurements for yield, (i.e. the amount of clean wool fibre), average fibre diameter and the percentage and type of vegetable fault.

At the direction of the Commonwealth Government the Authority which had operated as a division of the Corporation, was transferred to the private sector, effective from the beginning of July 1982. The new company, known as AWTA Ltd, draws its directors from the Australian Wool Corporation, Wool Council of Australia, Australian Council of Wool Buyers, Federal Council of Private Treaty Wool Merchants, National Council of Wool Selling Brokers of Australia, Wool Scourers and Carbonisers Association of Australia and Wool Textile Manufacturers of Australia. In matters of significant policy, woolgrower interests have a majority vote.

AWTA Ltd, was incorporated in Victoria on 5 May 1982.

Wool promotion

The Australian Wool Corporation is responsible for the promotion of the greater use of wool both in Australia and overseas. The cost of promotion is shared by the Government and the woolgrowing industry. The woolgrowers' contribution for promotion is raised by means of a tax on wool sale proceeds which is currently at the rate of 2.5 per cent (part of a total 3 per cent levy used to finance both wool research and promotion). The Commonwealth's contribution to wool promotion has been set at $20 million annually for the 3 years commencing 1981-82. Most of the promotion funds are remitted to the International Wool Secretariat (IWS) with headquarters in London. Australia provides approximately two thirds of the IWS budget.

Wool research

The wool research program covers five broad areas; research into wool production, wool harvesting and distribution, and economic and textile research. Wool research activities funded from the Wool Research Trust Fund (WRTF) are financed by growers and the Government on a 50:50 basis with the grower's contribution raised by means of a 0.5 per cent levy on wool sale proceeds (part of the total 3 per cent levy mentioned above). In addition to the wool research which is funded in this manner the CSIRO and the Bureau of Agricultural Economics carry out considerable additional wool research which is funded from Consolidated Revenue.

Wool income

Fluctuations in wool prices have a marked effect on agricultural and national income. In 1945-46 the gross value of wool production was $117.2 million, representing 17.4 per cent of the gross value of all agricultural commodities produced, while in 1950–51, when prices reached a peak during the Korean War, wool was valued at $1,303.8 million, or 55.6 per cent of total agricultural industries. More recent figures for the contribution of wool income to total agricultural production and national exports reflect the growth in other commodities over the intervening years, rather than a decline in the fortunes of the wool industry.

Year	*Value of wool as a per cent of total agriculture*	*Value of wool exports as a per cent of total Australian exports*
1977-78	17.3	10.5
1978-79	13.4	11.2
1979-80	14.0	9.2
1980-81	14.4	10.1
1981-82	14.1	9.8
1982-83p	15.8	8.5

Stocks

Stocks shown below of raw and semi-processed wool were held by wool processors, scourers, fellmongers, brokers, dealers and the Australian Wool Corporation. They exclude wool on skins since this wool is not recorded as production until fellmongered in Australia or exported on skins.

WOOL STOCKS
('000 tonnes)

	Stocks of—					
	Raw Wool		*Semi-processed wool*		*Total wool*	
At 30 June	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*
1977	265.6	156.3	8.6	5.1	274.2	161.4
1978	222.0	132.2	8.7	5.2	230.7	137.4
1979	162.0	96.4	9.1	5.5	171.0	101.9
1980	168.7	101.1	11.3	6.9	180.1	108.0
1981	153.2	91.6	10.8	6.5	163.9	98.1
1982	206.8	124.5	8.1	4.9	214.8	129.4

Wool processing

Approximately 86 per cent of all wool passing through the Australian auction system comprises combing fleece and oddment types which are ultimately processed on the worsted system. The remaining 14 per cent, being the shorter or carding wools such as locks, crutchings, and lambs wool, is directed to the woollen system. This latter group is boosted some 5-10 per cent by noils combed out during worsted processing.

At present about two thirds of total carding types produced are processed in Australia.

Over recent years there has been a trend to increased early stage processing of Australian wool before export. Approximately 95 per cent of total Australian wool production enters international trade.

The main scope for expanded domestic processing remains with worsted types for export in scoured or combed top form. Japanese processors initiated the export of scoured worsted types from Australia and Japan became Australia's major export market for scoured wool in 1973-74.

Within Australia, in 1980-81 there were 28 operating establishments involved in early stage processing. Before 1975 the wool processing industry was largely centralised in cities close to major ports. Since then, however, a general trend towards decentralised inland locations has occurred.

It is anticipated that processed wool could represent 30-35 per cent of total wool exports in the late 1980's.

The principal factors responsible for this trend are:

Costs of effluent treatment or discharge are widely regarded as the most important.

Freight rates favour export in processed form, despite shipping concessions for greasy wool packed at higher densities.

Energy costs: electricity, coal and natural gas all cost less in Australia than in Japan and Europe.

Government policies such as the Export Expansion Grant Scheme and decentralization subsidies.

Wool consumption

Two series of calculations on Australian wool consumption are shown below.

1. Consumption of raw wool, which measures consumption in terms of scoured wool used by mills.
2. Consumption of processed wool, which is calculated from the usage of woollen and worsted yarn.

Raw wool comprises greasy, slipe, scoured and carbonised wool. This series has been included for comparison purposes with other countries.

This second series is considered to be a more satisfactory measure of Australian wool consumption, principally because allowance is made for significant quantities of wool tops exported. However, both series relate to consumption of wool by the wool textile industry, and should not be used as measures of consumption of wool at retail level. It has not been possible to estimate wool consumption at retail level because of the impracticability of obtaining reliable data concerning the wool content of the multiplicity of woollen and worsted piece-goods and finished articles exported and imported and held as stock by manufacturers, wholesalers and retailers.

CONSUMPTION OF RAW AND PROCESSED WOOL
('000 tonnes)

	Consumption of raw wool		*Consumption of processed wool*					
			Worsted yarn used (a)		*Woollen yarn used (b)*		*Total*	
Year	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*	*Greasy*	*Clean*
1976–77	49.1	27.0	12.6	6.8	15.0	8.5	28.7	15.9
1977–78	47.5	28.0	11.9	6.9	14.2	8.7	27.3	16.2
1978–79	51.0	30.0	11.9	6.8	14.7	9.0	27.7	16.4
1979–80	56.1	30.9	12.4	6.7	15.8	9.0	29.3	16.3
1980 81	51.6	30.7	8.8	5.2	14.7	9.1	24.7	14.8
1981 82	47.7	30.0	8.0	4.9	14.8	9.7	23.9	15.1

(a) Wool content of yarns containing a mixture of wool and other fibres. (b) Comprises pure and mixed woollen yarn.

Exports of wool

From its earliest days the Australian wool industry has been export oriented, and today approximately 95 per cent of total annual production of wool is exported.

The great bulk of this leaves the country in its natural 'greasy' state, but increasing quantities are being exported in part processed forms (i.e. scoured, carbonised, top and noil) and as wool on skins.

EXPORTS OF WOOL

Year	Selected exports ('000 tonnes: greasy basis)			Total exports	
	Greasy and slipe	Scoured and carbonised	Exported on skins	Greasy basis (a)	Value f.o.b.
				'000 tonnes	$m
1977–78	493.6	70.7	64.4	647.0	1,289
1978–79	568.4	89.0	54.6	711.9	1,593
1979–80	505.3	93.2	59.5	658.1	1,734
1980–81	529.4	105.5	57.0	694.2	1,935
1981–82	497.6	96.3	50.6	644.5	1,925
1982–83p	488.9	85.0	56.1	629.9	1,886

(a) Includes processed wool.

For further details on sheep shorn, wool production and overseas trade *see* the following publications: *Livestock and Livestock Products, Australia* (7221.0), *Sheep Numbers, Shearing and Wool Production Forecast, Australia* (7211.0), *Shearing and Wool Production Forecast, Australia (Preliminary)* (7210.0), *Livestock Products Australia* (monthly) (7215.0), *Overseas Trade, Australia* (5409.0, 5410.0), *Production Bulletin No. 4: Australia* (8360.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

Dairying

Dairying occurs in all States in Australia but is mainly concentrated in the south-eastern region of the mainland, and in Tasmania, where rainfall is ample and fairly reliable. It is predominantly coastal, but has also developed inland in small areas close to population centres and, on a larger scale, in some irrigated regions in the Riverina of New South Wales and northern Victoria.

Australian dairy cattle have shown steady improvement in quality, as demonstrated by milk yield, over the years. This is attributable to improved breeding associated with herd recording; the use of artificial insemination; better feeding resulting from the use of improved pastures and supplementary feed; and better farming methods arising from the application of new management practices and the use of the latest technology; and a contraction of the industry to climatically more favourable areas. Typical of the developments which have occurred are the almost total change from on-farm separation and delivery of cream to the collection of whole milk by milk tankers from on-farm refrigerated milk vats and the introduction of Herringbone and Rotary type dairies on farms.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are being used overseas. State Agricultural Departments give advice on the most suitable methods of production and inspect animals, buildings and production, so that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

MILK CATTLE NUMBERS
('000)

31 March	Bulls used or intended for service	Cows and heifers used or intended for production of milk or cream for sale			House cows and heifers(a)
		Cows (in milk and dry)	Heifers		
			1 year and over	Under 1 year	
1978	60	2,056	480	367	99
1979	55	1,921	442	369	78
1980	56	1,869	431	396	77
1981	54	1,819	460	393	74
1982	49	1,810	465	387	73
1983p	47	1,795	458	390	70

(a) One year and over, kept for the establishment's own milk supply.

The economic position of the industry

During much of the 1970's the Australian dairy industry faced reducing demand and low export prices for dairy products which resulted in considerable contraction and rationalisation of all sectors of the industry. The downturn in the economic and trading environment was attributable to production policies adopted by major producing and consuming countries such as the EEC and USA coupled with protection of their domestic markets, which resulted in world production of most dairy products in excess of market opportunities.

Following a period of over a decade of gradual decline, milk production in Australia appeared by 1981 to have stabilised. This largely reflected improved domestic and export prices which together had significantly improved producers' returns. At 1981 production levels, the industry was not as heavily reliant on the export market as in the past. Depressed prices in international trade seemed, therefore, less likely to significantly affect Australian producers' returns than previously.

By 1983, however, prospects for the dairy industry were again being affected by increasing milk production, despite a lack of growth in domestic market demand and an international dairy market characterised by strong downward price pressure, large stock levels and considerable uncertainty.

Adjustment

The Rural Adjustment Scheme replaced the Rural Reconstruction Scheme on 1 January 1977 and incorporates most of the measures previously available under the Dairy Adjustment Program. Assistance approved for dairy farmers to 30 June 1983 totalled $32.9m (including $2.953m in 1982–83).

Herd improvement

The Australian Dairy Herd Improvement Scheme was formerly known as the National Dairy Herd Improvement Scheme. The objective of the scheme is to increase productivity per cow by better evaluation and selection of bulls and cows for breeding purposes through the provision of more accurate genetic information.

Government assistance

The downturn in the Australian dairy industry during the 1970s resulting largely from the low international prices for dairy products, led in 1976–77 to the introduction of new domestic marketing arrangements and a Government scheme to underwrite minimum prices for the major dairy products.

The voluntary equalisation arrangements which had operated in the dairy industry since 1923 were considered to be in danger of collapse because of the phasing out of a production bounty which had applied to butter and cheese.

Legislative backing for a levy/disbursement scheme has become the basis for stabilised marketing arrangements. It is aimed at protecting the domestic price structure for prescribed dairy products from disruptive price competition and providing each manufacturer with an equalised return for its domestic and export sales of such products. Prescribed dairy products include butter/butteroil, skim milk powder, wholemilk powder, casein and certain types of cheese.

From 1976–77 to 1980–81 the Government underwrote minimum prices for prescribed products. These prices were set annually on the basis of a minimum return per kilogram butter-fat in manufacturing milk.

In June 1981, following agreement with the dairy industry, the Government announced the introduction of a new underwriting scheme for prescribed dairy products to apply for two years from 1 July 1981. Upon the recommendation of the Industries Assistance Commission (IAC), this scheme was extended in June 1983 to cover the 1983–84 production year. The objective of the new scheme is to protect industry revenue against the unexpected and sharp falls in market returns without masking the underlying long term trends. Under-written levels for 1983–84 in $'s per tonne are: butter $2,020, skim milk powder $915, casein $2,196, cheese $1,709 and wholemilk powder $1,269.

The Government also assists by matching, on a dollar for dollar basis, expenditure of levy raised for the purpose of a program of research recommended by the Australian Dairy Research Committee.

During 1983, the IAC conducted a comprehensive review of Government assistance to the dairy industry. Future government policy on assistance will be decided following a study of the IAC's Report on its findings. The Report became available in November 1983.

PRODUCTION, UTILISATION AND GROSS VALUE OF WHOLE MILK

	Whole milk intake by factories			
Year	*Market milk sales by factories*	*Milk used in the manufacture of dairy products*	*Total intake*	*Gross value*
		—million litres—		($ million)
1978-79	1,504	4,144	5,648	627.7
1979-80	1,511	3,887	5,398	676.0
1980-81	1,541	3,702	5,243	885.1
1981-82p	1,552	3,716	5,268	1,033.9
1982-83p	1,572	3,953	5,525	1,060.0

These milk intake figures have been collected (from milk factories) by the Australian Dairy Corporation and replace statistics of whole milk production and utilisation previously compiled by ABS.

Domestic market

Over the past decade there has been a marked swing away from the production of butter and its by-products, skim milk powder and casein, to cheese and whole milk powder. This has been accompanied by an increased percentage of total milk production going to the fluid milk (including flavoured milk) market and being used in the manufacture of products such as yoghurt and table cream.

Increased emphasis is being placed by manufacturers on meeting the requirements of the domestic market and efforts are being made to supply the consumer with a more readily usable product. Recent developments include the introduction of ultra high temperature (UHT) treated milk products and butter-vegetable oil blends. Recognition of the importance of the domestic market has also been reflected in the introduction of improved new packaging and an increasing level of promotion of dairy products.

Except for cheese, the domestic market is virtually supplied from Australian produced dairy products. Cheese imports account for approximately 17 per cent of domestic cheese consumption.

Exports

Australia's export trade in dairy products has undergone a considerable change in the last decade in terms of both the volume and type of product exported and the direction of trade.

Between 1969-70 and 1980-81, there was a significant overall reduction in the volume of milk produced in Australia. Since 1980-81, however, milk output has shown a small upward trend. Nevertheless the overall availability of dairy products for export has declined from the levels of a decade ago. In wholemilk equivalent terms, total Australian exports of dairy products in 1982-83 amounted to approximately half the volume of exports in 1972-73.

Britain was Australia's major outlet for dairy products, particularly butter and cheese, until it joined the EEC in 1973. Australia's export markets are now more diversified and this has involved changes in the mix of products exported. Exports of butter, casein and, to a lesser extent, skim milk powder have declined significantly from the level recorded in the early 1970s. On the other hand, exports of cheese and wholemilk powder have tended to increase sharply over the last decade, although the volume of wholemilk powder exported in recent years has declined again.

Japan and South-East Asia are the principal markets for skim milk powder; USA and Japan for casein; South-East Asia and the Middle East for butter; South-East Asia for wholemilk powder and Japan and the Middle East for cheese.

The International market is currently characterised by considerable uncertainty and depressed prices owing mainly to the substantial surplus of dairy products which have been accumulated in the EEC and US. As a result, Australian exporters are encountering increasing difficulty in exporting product onto the world market.

PRODUCTION AND TRADE OF BUTTER AND CHEESE

Year	*Butter*			*Cheese*			
	Factory production	*Exports (a)*		*Factory production(c)*	*Exports (b)*		*Imports*
		Quantity	*Value f.o.b.*		*Quantity*	*Value f.o.b.*	
	'000 tonnes	'000 tonnes	$m	'000 tonnes	'000 tonnes	$m	'000 tonnes
1977–78	111.7	17.5	22.7	115.6	47.0	55.6	11.3
1978–79	104.8	28.2	37.8	141.8	51.4	69.0	12.1
1979–80	84.3	17.9	28.7	154.2	61.1	94.4	10.9
1980–81	79.2	12.0	23.1	136.7	54.1	103.7	13.3
1981–82	75.4	5.0	14.0	153.3	57.5	122.9	16.1
1982–83p	88.3	7.7	21.1	159.6	54.4	133.5	18.3

(*a*) Excludes ghee and butter concentrates. (*b*) Includes processed cheese exports. (*c*) Factory production is shown only for non-processed cheese.

Apparent consumption

CONSUMPTION OF MILK, BUTTER, CHEESE AND MARGARINE

Year	*Apparent consumption Total*			*Apparent consumption Per capita per year*				
							Margarine	
	market milk	*Butter*	*Cheese*	*market milk*	*Butter*	*Cheese*	*Table*	*Other*
	mil. litres	'000 tonnes	'000 tonnes	litres	kg	kg	kg	kg
1977 78	1,432	72	80	100.3	5.1	5.6	5.6	2.9
1978 79	1,452	65	87	100.6	4.5	6.0	5.9	2.9
1979 80	1,510	66	96	103.4	4.6	6.6	6.4	2.4
1980 81	1,540	64	98	104.0	4.3	6.6	6.7	2.5
1981 82	1,552	65	105	103.1	4.3	7.0	6.8	2.7
1982 83p	1,571	62	115	103.5	4.1	7.6	6.9	2.9

For further details on the dairying industry *see* the publications, *Livestock and Livestock Products, Australia* (7221.0), and *Production Bulletin No. 3: Food, Drink and Tobacco, Australia* (8359.0).

Beekeeping

Beekeeping is practised by some producers as a separate industry, and is carried on by others in conjunction with other branches of agriculture. A feature of the industry is that many apiarists operate on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to obtain a continuous supply of nectar for honey from suitable flora. While honey production remains the predominant sector of the industry, production of breeding stock and provision of pollination services is significant.

NOTE: Statistics in the following table relate to apiarists with forty or more hives.

BEEKEEPING STATISTICS

Year	*Number of apiarists*	*Number of beehives*		*Honey produced*			*Beeswax produced*	
		Productive	*Total*	*Quantity*	*Average production per productive hive*	*Gross value*	*Quantity*	*Gross value*
		'000	'000	'000 tonnes	kg	$'000	tonnes	$'000
1976 77	2,274	348	493	14.9	42.9	8,405	275	777
1977 78	2,151	363	479	18.6	51.2	13,480	329	1,096
1978 79	2,201	369	501	18.3	49.5	14,111	349	1,213
1979 80	2,141	402	511	25.0	62.0	19,050	464	1,719
1980 81	2,224	379	530	19.5	51.6	15,815	366	1,530
1981 82	2,263	402	544	24.8	61.8	18,211	481	1,978

EXPORTS OF HONEY AND BEESWAX

Year	Honey Quantity	Honey Value f.o.b.	Beeswax Quantity	Beeswax Value f.o.b.
	'000 tonnes	$'000	tonnes	$'000
1977-78	4.3	4,228	145	542
1978-79	5.7	6,124	194	743
1979-80	11.4	11,572	218	917
1980-81	8.2	8,985	177	733
1981-82	12.8	10,596	303	1,216
1982-83	14.7	13,075	368	1,387

Honey levy

The *Honey Levy Acts* (Nos. 1 & 2) 1962 impose a levy on domestic sales of honey. The current rate of levy is 2.45 cents per kg; it can be increased by regulation to a maximum of 2.70 cents per kg.

Additionally the *Honey Export Charge Act* 1973, imposes a levy on exports of honey. The current rate is 0.75 cents per kg; which may be varied by regulation up to 1.5 cents per kg.

Within the levy/export charge is the industry contribution to research of 0.25 cents per kg and the remainder is used to finance the operations of the Australian Honey Board.

Honey Exports

During 1982-83 the main feature of the export honey market was a firming of prices around the middle of the year resulting from the devaluation of the Australian dollar against major trade currencies. This plus the high cost of domestic stock holding due to high interest rates resulted in record exports and substantial reductions in the high levels of uncommitted stocks held at the beginning of the year.

For further information, *see* the publication *Livestock and Livestock Products, Australia* (7221.0).

Eggs and egg products

Recorded commercial egg production in mainland Australian States in 1982-83 is estimated to have increased by 2 per cent in comparsion with 1981-82. Management of production through hen quotas continued in all States and was directly responsible for the containment of production. Queensland and Western Australian production is estimated to have increased with falls in all other States.

While there will be some variation between the States in 1982-83 it is anticipated that aggregate mainland production will be in the order of 192 million dozen, compared with 188 million dozen for 1981-82.

EGGS AND EGG PRODUCTION: SUPPLY AND UTILISATION
(Eggs in shell weight)

Year	Production(a) Quantity	Production(a) Gross value	Exports	Processed food(b)	Apparent consumption in Australia as human food Total	Apparent consumption in Australia as human food Per capita per year
	'000 tonnes	$ million	'000 tonnes	'000 tonnes	'000 tonnes	kg
1976-77	192.7	178.6	22.2	22.4	173.1	12.4
1977-78	200.7	196.3	20.8	26.7	176.0	12.4
1978-79	195.7	196.9	16.3	20.5	180.2	12.6
1979-80	194.6	216.1	11.2	18.0	182.4	12.5
1980-81	202.4	227.4	18.9	23.2	183.3	12.4
1981-82	199.7	253.4	11.5	17.9	188.7	12.4

(*a*) Includes estimates for uncontrolled commercial production and production by self-suppliers. (*b*) Includes egg products as pulp and powder; also includes wastage.

Egg Consumption

Egg production and consumption data is not available for areas of Australia which fall outside the control of State Egg Boards or for "backyard" production. On the basis of State Egg Board data, domestic consumption is estimated to have risen by 2 per cent, compared with 1981-82, to around 177 million dozen.

Exports

Exports from Australia are predominantly in egg pulp form—white, yolk and whole egg—with Japan continuing to be the principal market. Over-supply on world markets and the emergence of additional countries into the world export trade have resulted in increasing competition with detrimental effect on available prices. Rising production, processing, packaging and freight costs in conjunction with price competition operate as an incentive to contain egg production as close as possible to levels of domestic demand. Such is the objective of hen quota controls operated by the States and while present export conditions prevail, export availability will continue to trend towards absolute minimums.

EXPORTS OF EGGS AND EGG PRODUCTS

			Eggs not in shell			
	Eggs in shell		*Liquid form*		*Dry*	
Year	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*
	'000 doz	$'000	tonnes	$'000	tonnes	$'000
1977-78	1,249	655	9,739	10,272	56	158
1978-79	962	514	8,200	9,790	99	374
1979-80	1,364	779	5,833	5,816	74	322
1980-81	1,423	1,113	8,508	8,891	50	337
1981-82	1,143	1,095	5,013	6,400	62	219
1982-83p	2,672	1,763	3,455	4,108	85	682

For further details on eggs and egg products *see* the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0).

Agricultural improvements

Fertilisers

Most Australian soils are deficient in phosphorus. Because of this and the significant but less widespread deficiency of sulphur in many soils, phosphatic fertilisers, particular single superphosphate, account for the bulk of fertiliser usage. Nitrogen deficiency is also general in Australian soils and the use of nitrogenous fertilisers is increasing. Potassium deficiency however is confined mainly to soils in the higher rainfall areas which are intensively cropped or used for irrigated pastures.

The bulk of Australia's requirements for phosphatic and nitrogenous fertilisers is manufactured locally, although in recent years imports of phosphatic and nitrogenous fertilisers have increased significantly. Production of phosphatic fertilisers is dependent upon imported rock phosphate and sulphur. Australia's sources of supply of rock phosphate are Christmas Island, Nauru, and USA (Florida), and while some sulphur is produced locally as a by-product of smelting operations, the bulk is imported mainly from Canada and USA. The two most widely used nitrogenous fertilisers—urea and ammonium nitrate—are manufactured from natural gas. Sulphate of ammonia is mainly a by-product of smelting operations. Potassic fertilisers are all imported. No suitable reserves of potash ores have been found in Australia.

Principal crops and pastures fertilised, etc.

Information regarding crop and pasture areas treated with artificial fertilisers, and the quantity of artificial fertilisers (superphosphate, nitrates, etc.) used, is given in the following tables.

ARTIFICIAL FERTILISERS: AREA AND USAGE

Year	*Area fertilised*	*Super-phosphate used*	*Nitrogenous fertilisers used*	*Other fertilisers used*
	'000 ha	'000 tonnes	'000 tonnes	'000 tonnes
1976–77	21,266	2,303	326	428
1977 - 78	24,324	2,538	490	383
1978–79	25,403	2,651	485	398
1979–80	n.a.	2,969	365	620
1980–81	n.a.	2,947	392	609
1981–82	26,777	2,874	395	599

Since the Second World War there has been a great expansion of the area of sown pasture accompanied by an increased use of fertilisers. New pasture varieties (including tropical species) have been developed, and nutrient or trace element deficiencies in soils identified.

The main artificial fertiliser used in Australia is superphosphate, over half of which is used on pastures, mainly in areas with moderate to good rainfall. Large quantities are also used on cereal crops.

SUPERPHOSPHATE USAGE

	Selected crops and pastures					
Year	*Sown and native pastures*	*Lucerne*	*Wheat*	*Other cereals*	*Sugar cane*	*Total*
AREA FERTILISED ('000 hectares)						
1976–77	10,007	447	6,745	3,366	285	21,266
1977 - 78	11,325	469	7,827	3,960	289	24,324
1978–79	12,079	379	8,004	4,220	266	25,403
1979–80	14,703	n.a.	8,607	n.a.	262	n.a.
1980–81	13,964	n.a.	8,723	n.a.	291	n.a.
1981–82	12,240	106	9,361	4,034	301	26,043
SUPERPHOSPHATE USED ('000 tonnes)						
1976–77	1,166	63	615	351	27	2,303
1977 - 78	1,335	67	635	392	25	2,538
1978–79	1,451	55	634	410	22	2,651
1979–80	1,820	n.a.	716	n.a.	26	2,969
1980–81	1,733	n.a.	756	n.a.	32	2,947
1981–82	1,518	21	801	416	31	2,874

PRODUCTION AND IMPORTS OF FERTILISERS

Item		*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
PRODUCTION							
Superphosphate (*a*)	'000 tonnes	3,388	3,680	4,202	3,770	3,568	2,968
Mixed chemical fertilisers (including complete manures)	'000 tonnes	828	993	1,050	1,277	n.y.a.	n.y.a.
Leaf and foliage type fertilisers (including dry and liquid form)	tonnes	n.p.	n.p.	3,758	n.p.	n.y.a.	n.y.a.
Manures (without added chemical fertilisers) (*b*)	tonnes	11,472	12,678	12,558	29,906	n.y.a.	n.y.a.

PRODUCTION AND IMPORTS OF FERTILISERS—*continued*

Item		*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
IMPORTS							
Crude fertilisers (mainly natural phosphate)	'000 tonnes	1,612	2,381	2,181	2,294	2,772	3,684
	Value $m	55.6	83.4	80.4	102.1	128.6	109.5
Manufactured, mineral or chemical fertilisers—							
Nitrogenous (*c*)	'000 tonnes	23	29	75	86	108	101
	Value $m	2.6	4.2	9.4	12.7	16.2	15.6
Potassic (*d*)	'000 tonnes	162	174	215	213	255	204
	Value $m	9.1	9.9	15.5	21.5	26.7	20.9
Other (*e*)	'000 tonnes	35	72	81	66	92	273
	Value $m	5.1	10.3	7.2	14.8	19.1	53.0

(*a*) Includes double and triple superphosphate and ammonium phosphate in terms of single superphosphate. (*b*) Blood, bone and/or offal, and other material. (*c*) Mainly ammonium nitrate, ammonium sulphate, calcium ammonium nitrate, sodium nitrate and urea containing in the dry state more than 45 per cent by weight of nitrogen. (*d*) Mainly potassium chloride and potassium sulphate. (*e*) Includes phosphatic fertilisers and compounds of the main elements nitrogen, phosphorus and potassium (N.P.K. complete fertilisers).

Note: Production data are derived from the Annual Manufacturing Census and the recorded monthly production.

Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures and for pest and vermin extermination. The statistics below have been compiled from returns collected from the operators of aircraft engaged in aerial agriculture. The collection, which was commenced in 1956, is now the responsibility of the Department of Aviation.

AERIAL AGRICULTURE

	Area treated ('000 hectares)			*Materials applied ('000 tonnes)*		
Year ended 31 March	*Top dressed and seeded*	*Sprayed*	*Total(a)*	*Super-phosphate*	*Seed*	*Productive hours flown ('000 hours)*
1978	2,403	1,782	4,260	287.2	3.8	69.5
1979	3,212	2,956	6,224	374.5	5.9	101.2
1980	4,416	2,412	6,907	514.2	6.4	127.3
1981	2,727	2,054	4,850	489.5	4.6	98.7
1982	2,461	2,760	5,395	276.7	2.9	86.3
1983	1,643	1,638	3,450	193.7	3.2	62.2

(*a*) Includes other types of treatment (rabbit baiting, etc.).

Irrigation on agricultural establishments

Irrigation is one of the factors by which agriculture is further developed. The variability in stream flow and annual rainfall means that successful irrigation of crops and pastures is dependent on storage. Ground water supplies are also used in areas where the quantity is adequate and the quality is suitable. The area of land irrigated (approximately 1.6 million hectares in 1980–81) forms about 9 per cent of the total area under crops and only 0.3 per cent of the total area of agricultural establishments.

Most irrigation areas in Australia are supplied with water by a State authority, although there are also private schemes operating. The major reasons for expansion of the area irrigated have been public investment in the building of dams and reservoirs and private investment by farmers in irrigation plant and earthworks. Irrigation statistics are collected irregularly. Chapter 15, Water Resources, contains additional details of water conservation and irrigation with international, national and interstate aspects.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, AUSTRALIA 1980–81
('000 hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	49.7	16.6	n.a.	1.2	67.9
Other pastures (sown or native)	115.4	664.3	n.a.	20.8	800.5
Cereals for all purposes	53.6	320.2	n.a.	9.1	383.0
Vegetables for human consumption	57.4	8.4	0.7	3.9	70.4
Total fruit	30.2	12.1	9.1	3.5	55.0
Grape vines	11.9	26.8	5.3	1.6	45.6
All other crops	77.3	141.4	0.6	12.9	232.1
Total	**395.5**	**1,189.9**	**15.7**	**53.2**	**1,654.2**

SOURCE AND USAGE OF WATER FOR IRRIGATION, AUSTRALIA

Irrigation— area irrigated, by source 1980–81(b)			*Estimated annual water use in 1977(a)*			
			Irrigation	*Rural (excl irrigation)*	*Urban industrial*	*Total*
	('000 ha)	percentage of total area irrigated %	—million cubic metres—			
Surface water—						
State irrigation schemes	941.3	57				
Rivers, creeks, lakes	370.6	22		n.a.		
Farm dams	90.8	5				
Total surface water	1,402.8	85	11,554	742	2,493	14,789
Town or country reticulated(c)	15.4	1	..	..	..	..
Underground (ground water)	236.1	14	1,639	337	480	2,486
Total, all sources	**1,654.2**	**100**	**13,256**	**1,348**	**3,187**	**17,774**

(*a*) Estimated for an average climatic year; data source is the first *National Survey of Water Use in Australia*, Department of National Development and Energy and Australian Water Resources Council, Occasional Papers Series No. 1, AGPS, 1981. The data in the original are shown by drainage division and provide a sound basis for the efficient utilisation of existing resources and for the planning of future projects. (*b*) Data source is the annual Agricultural Census and represents area actually irrigated. Total area will therefore agree with that shown in the table on crops and pastures irrigated by method of irrigation. (*c*) This source represents irrigation water which has come from either surface or underground sources.

Agricultural machinery on agricultural establishments

Statistics on the type of agricultural machinery on agricultural establishments were published in early issues of the Year Book. Additional information was published in the publication *Agricultural Land Use, Improvements and Labour, Australia*, 1980–81 (7103.0). Details of the sales of new tractors for agricultural purposes are given in the quarterly publication *Sales and Stocks of New Tractors, Australia* (8507.0).

Employment in Agriculture

Employment on agricultural establishments

Prior to 1976 data on employment collected at the annual Agricultural Census differentiated between permanent full-time employees and temporary employees. Full-time workers excluded casual or seasonal workers and other persons working only part-time. Casual or seasonal workers were shown as temporary employees.

In the past it has been difficult to maintain comparability of employment on agricultural establishments from year to year because of the changing number of lessees and share farmers and because of the tendency of many farmers to include part-time family helpers as full-time workers in their returns. Since the Second World War there has been a decline in the percentage of people living in rural areas due, in part, to a rising standard of living accompanying the introduction of new techniques and increasing use of capital equipment, fuel, fertilisers, and pesticides. As a result, a smaller agricultural labour force is now producing a larger output of farm products.

EMPLOYED PERSONS IN AGRICULTURE AND SERVICES TO AGRICULTURE ('000)

Month of August	*Males*	*Married females*	*All females*	*Persons*
1978	274.9	63.7	78.1	353.0
1979	295.4	69.1	80.3	375.7
1980	285.9	77.1	92.4	378.3
1981	281.7	86.3	103.0	384.7
1982	282.5	87.0	100.1	382.5
1983	290.4	80.0	93.0	383.4

Source: Monthly population survey conducted by the ABS throughout Australia. For further details *see The Labour Force, Australia* (6203.0).

Regulation of Australian agricultural industries

Year Book No. 61, pages 837–57, contains a summary of the means by which agricultural industries are assisted and regulated. It is not intended as a comprehensive statement of all the consultative and legislative assistance and control measures that exist, but rather as a description of the way in which these processes affect the crops, livestock and livestock products referred to earlier in this chapter.

Readers, however, are referred to the latest edition of *Rural Industry Information Papers* prepared annually by the Department of Primary Industry and published by the Australian Government Publishing Service. The *Papers* contain up-to-date information on production and market prospects for Australia's primary industries together with details of Government assistance measures.

CHAPTER 14

FORESTRY AND FISHERIES

FORESTRY

Forestry in the States

In the Australian Federal framework, State Governments are primarily responsible for land management. Each State has a forest service responsible for the management and control of publicly-owned forests, in accordance with Forestry Acts and Regulations. Forest management aims to satisfy all reasonable demands by the community on the forest estate including timber production, provision of minor forest products, grazing, protection of native flora and fauna, recreation and watershed protection.

Forestry in the Territories

The Department of Territories and Local Government is responsible for the management and control of forests in the Australian Capital Territory. Forestry in the Northern Territory is the responsibility of the Northern Territory Conservation Commission.

Commonwealth Forestry Administration

The Department of Primary Industry is responsible for forestry matters at the national level. Its primary responsibilities are the administration of a control on the export of unprocessed timber, liaison with State, national and international organisations concerned with forestry, provision of the Secretariat for the Australian Forestry Council and compilation of national statistics on the forest industries.

Existing Forest Estate

Native Forests

The total area of native forest, defined as land dominated by trees with an existing or potential mature height of twenty metres or more, including native stands of cypress pine in commercial use regardless of height, was estimated at 40.8 million hectares as at 30 June 1982. Thirty-five million hectares of the natural forests are dominated by eucalypts. For a more detailed examination of Australian native forests, *see* Yearbook No. 61, Chapter 24.

The following tables show classifications of native forest areas in Australia by forest type and ownership. Plantation areas are dealt with separately.

NATIVE FOREST AREAS CLASSIFIED BY FOREST TYPE, 30 JUNE 1982

('000 hectares)

Forest type group	*N.S.W.(a)*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Rainforest	253		1,074	–	–	472	38	–	1,837
Eucalypt									
Productivity Class I(*b*)	1,220	631	204	–	180	502	–	–	2,737
Class II(*c*)	3,649	3,981	1,290	–	2,792	1,845	–	51	13,608
Class III(*d*)	8,320	293	3,140	–	19	–	–	–	11,772
Tropical eucalypt and paperbark		–	4,078	–	–	–	2,450	–	6,528
Cypress pine	1,908	6	1,685	–	–	–	778	–	4,377
Total	**15,350**	**4,911**	**11,471**	**–**	**2,991**	**2,819**	**3,266**	**51**	**40,859**

(*a*) Details last revised 30 June 1972; adjustment made to rainforest following 1981 re-inventory of this forest type. (*b*) Relatively high productivity. (*c*) Moderate productivity. (*d*) Relatively low productivity.

NATIVE FOREST AREAS CLASSIFIED BY OWNERSHIP, 30 JUNE 1982
('000 hectares)

Ownership category	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
State forestry(*a*)	2,866	1,916	3,126	–	1,919	1,272	312	–	11,411
Other public(*b*)	6,208	1,536	5,672	–	390	399	2,639	51	16,895
National parks (*c*)	993	853	1,394	–	140	122	315	–	3,817
Private (*d*)	5,283	606	1,279	–	542	1,026	–	–	8,736
Total	**15,350**	**4,911**	**11,471**	**–**	**2,991**	**2,819**	**3,266**	**51**	**40,859**

(*a*) Publicly owned land, permanently reserved or dedicated primarily for timber production. (*b*) Publicly owned land, vacant or occupied under lease, not specifically reserved for timber production, but on which control of timber rests with the Crown. (*c*) Publicly owned land, permanently reserved for purposes other than timber production. Some wood production is allowed in certain national and forest parks in Victoria. (*d*) Privately owned land, and leasehold where the Crown has no control over timber rights.

Plantations

Tree plantations of a few coniferous species now provide a large part of Australian-grown wood supplies. The large scale establishment of these plantations was commenced by State Forest Services early this century, and in the case of South Australia, last century, to overcome the shortage of native coniferous timber. In an eleven year period covered by the *Softwood Forestry Agreements Acts* 1967, 1972 and 1976, the Commonwealth provided financial assistance to the States in the order of $55 million for an extended program of softwood plantation development. A further Act in 1978, provided funds for a five year period to 30 June 1982 for the maintenance of the area of plantations established previously with Commonwealth funds.

Privately owned plantations amount to approximately two-fifths the area under State ownership. New plantations (including replanting) are currently being established at the rate of 30,000 hectares per annum, of which almost one-third is by private enterprise. A detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in Year-book No. 59, page 880. The following table shows total area of plantations in Australia classified by species.

PLANTATION AREAS(*a*), CLASSIFIED BY SPECIES, 31 MARCH 1982
(Hectares)

Species group	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Coniferous—									
Pinus radiata	177,975	169,564	3,563	90,985	38,834	56,761	—	13,500	551,182
Pinus elliottii	4,819	—	96,307	—	124	—	—	—	101,250
Pinus pinaster	—	1,513	—	5,383	25,742	—	—	—	32,638
Pinus caribaea	1,341	—	23,456	—	—	—	1,717	—	26,514
Araucaria	1,488	—	42,848	—	—	—	1	—	44,337
Other coniferous(*b*)	8,032	3,154	5,719	501	139	370	2,545	860	21,320
Total coniferous	*193,655*	*174,231*	*171,893*	*96,869*	*64,839*	*57,131*	*4,263*	*14,360*	*777,241*
Broadleaved—									
Eucalyptus	7,290	13,117	2,905	861	8,398	6,534	2	—	39,107
Populus	2,188	345	—	—	—	—	—	—	2,533
Other broadleaved	—	80	524	—	—	107	1	—	712
Total broadleaved	*9,478*	*13,542*	*3,429*	*861*	*8,398*	*6,641*	*3*	—	*42,352*
Total	**203,133**	**187,773**	**175,322**	**97,730**	**73,237**	**63,772**	**4,266**	**14,360**	**819,593**

(*a*) Public and private ownership. (*b*) Includes all species other than P. radiata in private ownership.

Australian Forestry Council

In 1964, the Australian and State Governments formed the Australian Forestry Council to co-ordinate the development of the forest resource in the general interest of the community and to guide national programmes for the production, utilisation and conservation of Australian forests. Membership of the council comprises the State and Northern Territory Ministers responsible for forestry and the Commonwealth Minister for Primary Industry. The council is serviced by a Standing Committee and specialist sub-committees.

Research

Commonwealth Scientific and Industrial Research Organization (CSIRO)

The Division of Forest Research in the Institute of Biological Resources conducts research in the core areas of forest ecology, forest diseases, forest physiology, forest operation, fire behaviour and soils, nutrition and hydrology. The Division also conducts research into taxonomy, modelling and seed research. The Division maintains close liaison with relevant State authorities and, on occasion, collaborates with private companies. It operates two regional stations and three regional groups in the States.

Within the Institute of Biological Resources (Divisions of Plant Industry, Entomology, Soils, Water and Land Resources and Wildlife and Rangelands Research) and the Institute of Energy and Earth Resources (Division of Groundwater Research) research is undertaken on forestry problems relevant to the disciplines pursued in these Divisions.

Within the Institute of Industrial Technology, the Division of Chemical and Wood Technology carries out a wide range of investigations relating to the properties of wood, the processing and uses of wood and wood products. The research programs of the Division are directed towards developing ways whereby Australia's forest resources can be more effectively utilised. The programs include processing of wood and timber, technology of fibre separation, wood and fibre properties, composite wood and paper products, assessment of cellulosic resources and conservation of wood-based materials. Technology for the production of high value chemicals from wood and other plant materials is also being investigated.

The Divisions provide assistance to individuals and industry, provide training and experience for overseas technologists and maintain co-operative aid projects with developing countries.

Education

The Australian National University's Department of Forestry in Canberra and the Faculty of Agriculture and Forestry of the University of Melbourne offer undergraduate courses leading to a Bachelor of Science degree in Forestry. Most States provide for sub-professional forestry training.

Each year the Department of Primary Industry makes available awards for full-time postgraduate research, normally leading to the degree of Master and/or Ph. D at an Australian University. The Department also administers an award based upon a private bequest for postgraduate study at Oxford University.

Timber and timber products

The selected details shown below have been compiled from the annual census of manufacturing establishments. For further details *see* Chapter 17, Manufacturing and Internal Trade.

MANUFACTURING ESTABLISHMENTS(*a*)—SUMMARY OF OPERATIONS, 1981–82

1978 ASIC code(b)	*Industry description*	*Establishments at 30 June*	*Persons employed (c)*	*Turnover*	*Value added*	*Fixed capital expenditure less disposals*
		No.	No.	$'000	$'000	$'000
2531	Log sawmilling	729	13,217	582,101	322,068	19,976
2533	Veneers and manufactured boards of wood	82	5,838	402,395	155,054	7,542
2537	Hardboard woodchips	11	728	145,155	54,670	3,964

(*a*) All manufacturing establishments owned by multi-establishment enterprises and single establishment enterprises; with four or more persons employed. (*b*) Australian Standard Industrial Classification. (*c*) Average over whole year includes working proprietors.

TIMBER AND SELECTED TIMBER PRODUCTS PRODUCED (*a*)

Item		*1979–80*	*1980–81*	*1981–82*
Undressed sawn timber—				
Recovered from sawn logs—				
Australian grown—				
Broadleaved	'000 cu m	2,143	2,217	2,152
Coniferous	"	1,136	1,190	1,125
Total	"	**3,279**	**3,407**	**3,276**
Woodchips (green weight)—				
Hardwood (broad leaved)	'000 tonnes	4,798	4,410	3,943
Plywood—				
Commercial—(surface measure)	'000 sq m	4,611	5,275	4,502
(1 mm basis)	"	38,619	42,494	39,109
Waterproof—(surface measure)	"	3,843	4,032	4,076
(1 mm basis)	"	46,591	48,680	47,980
Particle board (resin bonded)	'000 cu m	667	686	707
Wood pulp—				
Chemical	tonne	174,223	168,555	181,097
Mechanical	"	513,347	537,775	487,498
Other	"			
Paper—				
Newsprint	tonne	221,198	214,447	303,563
Printings	"	91,559	102,514	96,775
Writing (incl. cartridge)	"	(*b*)	(*b*)	(*b*)
Wrapping	"	382,032	411,322	372,457
Blotting	"	(*c*)	(*c*)	(*c*)
Duplicating	"	(*d*)119,052	(*d*)118,526	(*d*)101,669
Other paper	"	(*e*)29,426	(*e*)23,680	(*e*)25,001
Tissue and sanitary papers	"	104,599	108,343	110,570
Paperboard (incl. strawboard)	"	482,466	485,995	486,627

(*a*) Excludes production of small single establishment enterprises with less than four persons employed and establishments engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. (*b*) Combined with 'Duplicating' paper. (*c*) Combined with 'Other paper'. (*d*) Includes 'Writing (incl. cartridge)' paper. (*e*) Includes 'Blotting' paper.

Woodchips

The woodchip industry entails the procurement of wood and its mechanical reduction to chips about the size of an Australian 50 cent piece. These chips are either exported for pulping or retained for use in domestic pulping operations.

Timber and timber products

The major forest industries include the sawmilling, ply and veneer, reconstituted board (particleboard, fibreboard) and pulp and paper industries. The sawmilling industry is the largest single user of logs harvested from Australian forests (51 per cent), followed by the pulp and paper industry (39 per cent). Currently about 72 per cent of total volume of logs harvested are obtained from natural forests and the remainder mainly from coniferous plantations. This proportion will change over time so that towards the end of this century about half the supply of logs may be from coniferous plantations. Total removals at that time are estimated at 23 million cubic metres compared to current log removal of 16 million cubic metres.

The value of imports of forest products in 1981-82 was in the order of $1,157 million while the value of exports of timber products was $239 million.

The following table shows the production, imports, exports and domestic consumption of sawn timber and major timber products

SAWN TIMBER AND MAJOR TIMBER PRODUCTS, 1981-82

(*Source:* Forestry Branch, Department of Primary Industry and Australian Bureau of Statistics)

Item		*Production (1)*	*Imports (2)*	*Exports (3)*	*Domestic Consumption (1 + 2 − 3)*
Sawn timber	cu m	3,157,216	1,140,006	32,738	4,264,484
Plywood	cu m	89,126	81,225	1,468	168,883
Railway sleepers	cu m	207,335	–	17,755	189,580
Particleboard	cu m	647,163	496	6,289	641,370
Hardboard	cu m	101,819	1,393	3,155	100,057
Newsprint	tonne	307,183	251,912	1,432	557,663
Printing and writing	tonne	193,383	289,300	12,748	469,935
Other paper	tonne	503,657	149,062	62,590	590,129
Paperboard	tonne	453,804	57,328	3,342	507,790

In addition to the products listed above, exports for 1981-82 of pulpwood (virtually all in the form of woodchips) was 3,820,595 tonnes (green).

FISHERIES

Collection and presentation of fisheries statistics

Source and basis of statistics

Statistics presented in this section of the chapter are obtained from the collections of State Fisheries Authorities. In all States except Queensland and Tasmania, the information is derived from returns collected from licensed fishermen. In Queensland the statistics have, to date, been based mainly on Fish Board receipts, but a new collection from fishermen, fish wholesalers and processors is now being developed. Tasmanian data are obtained from buyers and processors. Additionally, details of New South Wales tuna production are supplied by the CSIRO and particulars of Australian pearl culture have been collected and supplied by the Fisheries Division of the Department of Primary Industry.

Australian fisheries production statistics are generally in terms of the form in which the products are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures for pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

For more details of employment and boats and equipment for general fisheries and particulars of the whaling industry *see* earlier issues of this publication.

Fisheries resources and their commercial exploitation

Fish

Over 3,000 species of marine and freshwater fish occur in and around Australia. Australian fishermen concentrate their efforts on estuarine, coastal, pelagic (surface and mid-water swimming) and demersal (bottom living) fish that occur off the north-east, south-east and south-west coasts. Off north Australia, barramundi (*Lates calcarifer*) constitutes the most important estuarine and coastal species, while in the south-east and south-west regions, mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus* spp.) Australian salmon (*Arripus trutta*) and Australian herring (*Arripus georgianus*) are important catch components.

Major pelagic fisheries are Spanish mackerel (*Scomberomorus commerson*) off north Australia, and southern bluefin tuna (*Thunnus maccoyii*), snoek (*Leionura atun*), pilchards (*Sardinops neopilchardus*) and anchovies (*Engraulis australis*) off south-east Australia. Southern bluefin tuna are also fished off south-west Australia. Significant stocks of jack mackerel off southern Australia are as yet lightly fished.

A large multispecies demersal fishery that targets on flathead (*Neoplatycephalus* and *Platycephalus* spp.) morwong (*Nemadactylus* spp.), redfish (*Centroberyx affinis*) gemfish (*Rexea solandri*) and blue grenadier (*Macruronus novaezelandiae*), exists off south-east Australia. Demersal inshore snapper (*Chrysophrys auratus*) fisheries exist off south-west and south-east Australia; in the latter region, stocks of whiting (*Sillaginidae*) are also fished. In the northern tropical region, reef fish such as cods (*Epinephelus* spp.) are exploited. A large demersal fishery for edible school and gummy sharks (*Galeorhinus australis* and *Mustelus antarcticus*, respectively) is centred in Bass Strait.

Establishment of the 200 nautical mile Australian Fishing Zone (AFZ), has brought portions of oceanic tuna stocks, and demersal and pelagic fish stocks presently exploited by foreign fishing vessels, under Australian control. A foreign pelagic gill-net fishery off the north coast catches sharks (mainly *Carcharhinus* spp.), tuna (*Thunnus tonggol*) and Spanish mackerel while a demersal pair trawl fishery off the north-west coast exploits a tropical, multispecies fauna that includes threadfin bream (*Nemipteridae*) tropical snappers (*Lutjanidae*), emperors (*Lethrinidae*) goatfish (*Mullidae*) and hair tails (*Trichiuridae*).

Crustaceans

Prawns (*Penaeus* and *Metapenaeus spp*) provide the most valuable fishery in Australia and are taken in estuarine, coastal and offshore waters of all States except Tasmania. The western and southern rock lobsters (*Panulirus longipes cygnus* and *Jasus novaehollandiae*), also a valuable resource, are taken on rocky reefs around the southern half of Australia. Bay lobsters (*Thenus spp* and *Ibacus spp*) are taken incidentally to prawn trawling operations. Crabs (*Scylla spp* and *Portunus spp*) are taken mainly in Queensland, New South Wales and Western Australia.

Molluscs (edible)

Naturally-occurring oysters are harvested in all States; in New South Wales and Queensland the Sydney rock oyster (*Crassostrea commercialis*) is cultured commercially. The introduction of the Pacific oyster (*Crassostrea gigas*) to Tasmania and South Australia has provided a limited supply in those States. Following a serious decline in catches in the scallop (*Pecten meridionalis*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds were located in southern New South Wales, eastern Victoria, northern Tasmania and south-western Western Australia. However, substantial fluctuations in abundance have resulted in erratic production from year to year. A fishery based on the saucer scallop (*Amusium balloti*) is located off south and central Queensland and there is a small fishery for the same species in Shark Bay, Western Australia. An important abalone (*Haliotus spp*) fishery has been developed since 1964 in south-east Australia with Tasmania, Victoria and South Australia providing the bulk of the catch. There is also a small abalone fishery in south-west Australia. Mussels (*Mytilus planulatus*) are harvested in Victoria, Western Australia and New South Wales. Prior to 1978 small quantities of cephalopods, mainly squid, were produced in many localities. Feasibility fishing located promising squid resources (*Notutodarus gouldi*) in the south east. Squid (*Loligo spp*) form an important component to the trawl catch in the Arafura Sea.

Pearl-shell and trochus-shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken from various localities in the tropical waters of Australia between Broome in Western Australia and Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

Whales

Whales are now a protected species in the Australian Fishing Zone.

Fisheries administration and research

The Commonwealth Parliament has enacted a number of laws dealing with fisheries in Australian waters beyond territorial limits. The fisheries laws of the States and the Northern Territory apply to all kinds of fishing within the territorial sea and in inland waters. These laws require the licensing of persons and boats in the commercial fisheries and provide a range of other regulatory powers. The Commonwealth Government laws relating to fishing are the *Fisheries Act* 1952, the *Continental Shelf (Living Natural Resources) Act* 1968, *Foreign Fishing Boats Levy Act* 1981 and the *Fisheries Agreements (Payments) Act* 1981.

Fisheries Act 1952

This Act applies to commercial fishing for swimming species, by Australians in waters extending from 3 to 200 nautical miles seaward of the territorial sea baseline of Australia and the external territories excluding the territorial sea of another country, and by foreign boats in the 200 nautical miles Australian fishing zone. The Australian fishing zone comprises waters which extend 200 nautical miles seaward of Australia's territorial sea baselines but does not include territorial seas within the accepted fishing zones of adjacent countries or waters adjacent to Australia's Antarctic Territory.

Continental Shelf (Living Natural Resources) Act 1968

This Act regulates the searching for and taking, from the continental shelf of Australia and the external territories, of living sedentary species by Australians and foreigners. Sedentary species are those that, at the harvestable stage, are either immobile on or beneath the seabed or are unable to move except in constant physical contact with the seabed. The continental shelf is the seabed beyond the territorial sea and adjacent to permanently exposed land masses, extending to a depth of 200 metres or, beyond that depth, to where the exploitation of the seabed is possible.

Both these Acts require the holding of licences and empower the Minister to prohibit fishing activities as necessary for the conservation of resources and the management of the fisheries.

Foreign Fishing Boats Levy Act 1981; *Fisheries Agreements (Payments) Act* 1981

These Acts facilitate the imposition and collection of access fees for foreign boats fishing in the Australian fishing zone.

Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth Government which by agreement, has delegated to State fisheries authorities the necessary authorities for day-to-day administration of the Acts.

The Commonwealth and all State Parliaments as well as the Northern Territory House of Assembly have enacted amendments to fishery laws for the purpose of implementing the fisheries elements of the offshore constitutional settlement adopted by the Premiers' Conference in 1979. Those amendments, which came into force on 14 February 1983, authorise the Commonwealth and one or more States to enter into a formal legal arrangement to apply a single law (Commonwealth or State) to the management of a particular fishery from low water mark and to vest executive power under that law in:

(i) a joint authority, the membership of which would comprise the Commonwealth and the relevant State or States;
(ii) a State alone; or
(iii) the Commonwealth alone.

The administration of the fisheries is directed to a number of objectives of which the two most important are: conservation and management of the living resources of the Australian Fishing Zone to ensure that they are not endangered by over exploitation; and achievement of the optimum utilisation of the living resources by the Australian fishing industry and foreign interests. Consistent with these objectives, a number of controls have been introduced to prevent the depletion of the more heavily fished species. These controls take the form of seasonal closures, gear limitations, minimum size requirements and limited access rights, as well as outright prohibitions on the taking of certain species.

The Fisheries Development Trust Account (established under the *Fishing Industry Act* 1956) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act* 1969) are available to support financially, projects for the development and management of the fisheries and fishing industry which are consistent with the purposes of those Acts. The former was established with the proceeds of the sale of the assets of the Australian Whaling Commission and is replenished from Consolidated Revenue as necessary. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Government Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and paid into appropriate State research accounts for the same purpose.

Research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and rational utilisation of fisheries resources. To this end much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work, including feasibility fishing projects involving foreign fishing vessels, is also carried out and is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

Organisations in Australia at present engaged in research into fisheries matters are:

(i) CSIRO Division of Fisheries Research, which has its headquarters and main laboratory at Cronulla, N.S.W. and regional laboratories in Western Australia and Queensland (fisheries science);

(ii) CSIRO Division of Oceanography which has its headquarters and laboratory at Cronulla, N.S.W.;

(iii) CSIRO Division of Food Research, conducts research into handling, storage, processing and transportation of fish at its laboratory in Hobart, Tasmania;

(iv) State fisheries departments (fisheries laboratories have been established in Perth, Hobart, Melbourne, Sydney, Brisbane, Darwin and Cairns); research vessels are operated by New South Wales, Victoria, Western Australia, Tasmania and Queensland;

(v) Fisheries Division, Department of Primary Industry, Canberra (economic and management research, fishing technology, extension and education service); and

(vi) private fishing companies (surveys of fisheries resources, research into handling, processing and marketing).

Boats and equipment used in fisheries

Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels propelled by diesel or petrol engines of low power. The offshore vessels range up to 40 metres in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill-net; *shark* (edible), long-lines, gill-net; *Australian salmon,* beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill-net, hand-line; *morwong*, Danish seine, otter trawl, traps; *whiting*, handlines, Danish seine, beach seine, gill-net; *garfish*, beach seine; *Spanish mackerel*, trolling lines; *tuna*, pole and live-bait, purse seine, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns,* otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl; *abalone*, diving using hookah gear; and *pilchards, anchovies, jack mackerel* and *striped tuna*, purse seine.

Pearls, pearl-shell and trochus-shell

Ketch-rigged luggers about 15 metres long which carry crews of eight to fourteen members are used for pearl-shell fishing in northern Australia.

Production, processing and domestic marketing of fisheries products

Value of fisheries production

The following table shows the gross value of fishing by States. As the value of materials used in the course of production is not available for all States, it is not possible to show a comparison of net values. Gross value of production is the value placed on recorded production at the wholesale price realised in the principal markets. In general, the 'principal markets' are the metropolitan markets in each State, although, in cases where commodities are consumed locally or where they become raw material for a secondary industry, these points are presumed to be the principal markets. Gross value includes marketing costs which were estimated at $18.8 million for Australia for the year 1979-80. Details on marketing costs are not available for 1980-81.

PLATE 38

Tuna fishing off South Australian coast

Australian Information Service

FISHERIES: GROSS VALUE OF PRODUCTION

($'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
				GROSS VALUE				
1975–76	31,599	10,601	(a)17,137	(b)22,474	51,079	8,511	5,228	(c)146,629
1976–77	36,059	16,014	(a)34,955	(b)27,199	69,094	11,662	11,357	(c)206,340
1977–78	39,665	17,977	(a)40,808	(d)*23,615*	*88,340*	*12,609*	*10,337*	(c)233,351
1978–79	42,698	20,025	58,214	(d)29,924	80,233	14,636	19,576	(c)(g)279,258
1979–80	58,661	28,614	(e)62,789	(d)35,438	85,652	20,463	16,806	(c)(g)326,550
1980–81	70,027	33,686	(e)(f)86,292	(d)46,570	82,764	26,514	19,518	(c)(g)383,723

(a) Incomplete: excludes oysters and rock lobster. (b) Incomplete: excludes oysters. (c) Incomplete: *see* individual States. (d) Incomplete: excludes octopus, cuttlefish, oysters and scallops. (e) Incomplete: excludes rock lobster. (f) Incomplete: excludes shark. (g) Includes value of pearling which has been excluded from State totals.

Production of selected fisheries

SELECTED FISHERIES PRODUCTS: PRODUCTION AND GROSS VALUE

1980–81

Product	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
QUANTITY (tonnes)								
Fish(*a*)	28,025	11,176	(*b*)4,864	15,437	11,961	2,527	1,634	(*f*)75,623
Crustaceans(*a*)	3,215	851	(*c*)15,294	5,227	13,121	1,553	4,287	(*f*)43,548
Molluscs (edible)(*a*)	10,003	4,662	(*d*)2,800	(*e*)1,338	1,207	7,314	46	(*f*)27,369
GROSS VALUE ($'000)								
Fish	27,893	14,210	(*b*)7,036	16,699	10,128	3,654	2,267	(*f*)81,887
Crustaceans	15,608	5,611	(*c*)75,590	26,183	70,648	8,385	17,195	(*f*)219,220
Molluscs (edible)	26,526	13,865	(*d*)3,666	(*e*)3,688	1,988	14,476	57	(*f*)64,265

(*a*) Estimated live weight. (*b*) Excludes shark and freshwater fish caught. (*c*) Excludes rock lobster. (*d*) Incomplete. Excludes oysters. (*e*) Incomplete. Excludes octopus, cuttlefish, oysters and scallops. (*f*) Incomplete; *see* individual States.

SELECTED FISHERIES PRODUCTS: PRODUCTION, AND GROSS VALUE, AUSTRALIA

Product	*1978–79*	*1979–80*	*1980–81*
QUANTITY (tonnes)			
Fish(*a*)(*b*)	61,444	(*c*)69,030	(*c*)75,623
Crustaceans(*a*)	37,900	(*c*)38,029	(*c*)43,548
Molluscs (edible) (*a*)	25,285	(*c*)25,241	(*c*)27,369
Pearl-shell(*d*)(*e*)	185.0	309.6	226.0
Trochus-shell(*d*)(*e*)	—	n.a.	n.a.
GROSS VALUE ($'000)			
Fish(*b*)	56,501	(*c*)73,119	(*c*)81,887
Crustaceans	176,451	(*c*)188,009	(*c*)219,220
Molluscs (edible)	32,355	(*c*)47,296	(*c*)64,265
Pearl-shell(*d*)(*e*)	188	905	534
Trochus-shell(*d*)(*e*)	—	n.a.	n.a.

(*a*) Estimated live weight. (*b*) Excludes shark and freshwater fish caught. (*c*) Incomplete *see* individual States in table above. (*d*) Excludes manufacturing shell produced from pearl culture operations. (*e*) *Source:* Department of Primary Industry, year ended 31 December.

Pearls, pearl-shell and trochus-shell

PEARL CULTURE AND PEARL AND TROCHUS SHELL FISHING OPERATIONS(*a*)

(*Source:* Department of Primary Industry)

		1978	*1979*	*1980*
QUANTITY				
Pearl and Trochus shell fishing operations—				
Production of—				
Pearl shell(*b*)	tonne	185.0	309.6	226.0
Trochus shell	tonne	—	n.a.	n.a.
Pearl culture operations—				
Live shell introduced	No.	438,496	358,022	347,397
	tonne	130.5	112.6	107.0
Production—				
Round and baroque pearls	No.	88,369	77,231	65,982
	momme(*c*)	55,553	54,500	50,704
Half pearls	No.	248,360	138,687	191,781
Manufacturing shell	tonne	66.7	133.6	75.1

PEARL CULTURE AND PEARL AND TROCHUS SHELL FISHING OPERATIONS(*a*)—*continued*

(*Source:* Department of Primary Industry)

	1978	*1979*	*1980*
VALUE ($'000)			
Pearl and Trochus shell fishing operations—			
Production of—			
Live pearl shell	813	739	911
Pearl shell	188	905	534
Trochus shell	—	n.a.	n.a.
Pearl culture operations—			
Production of—			
Round and baroque pearls	11,768	15,281	15,340
Half pearls	1,104	594	1,078
Manufacturing shell	58	309	328

(*a*) Figures refer to the year ended January for the Northern Territory and Queensland and to the year ended December for Western Australia. (*b*) Excludes manufacturing shell produced from pearl culture operations. (*c*) A momme is a pearl weight measurement equivalent to 3.769 grams.

Processing of fish, crustaceans and molluscs

Processing plants are located strategically throughout Australia close to fishing grounds. A number of shore-based plants have been established in remote areas of northern Australia to service the expansion of the northern prawn fishery.

Rock lobsters, prawns, abalone and scallops are frozen for export; tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; and some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Ice is used extensively for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption is mainly dispatched fresh-iced to markets.

Domestic marketing of fisheries' products

Although virtually the whole of the tuna and Australian salmon catches are canned, the greater part of Australian fish production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary. In New South Wales, fish marketing is the responsibility of the Fish Marketing Authority which operates the Metropolitan Fish Markets. In other coastal centres of New South Wales, fishermen's co-operatives may become registered as local fish markets. In Queensland until recently the Fish Board sold all production on behalf of fishermen in that State, except fish intended for export and interstate trade. However, new legislation was passed in March 1982 giving fishermen a choice of selling their catch either through the Fish Board, Fishermens' co-operatives or licensed private processors and wholesalers. In Victoria, South Australia, Western Australia and Tasmania, there is no restriction on market outlets. In Victoria, South Australia and Western Australia, most fish is sent to metropolitan wholesale fish markets for auctioning; small quantities are processed for sale locally, chiefly by co-operatives. Nearly all fresh fish in Tasmania is consigned direct to processors. The principal outlets for fish products in Australia are retail and catering establishments.

CHAPTER 15

WATER RESOURCES

This chapter is divided into two major parts:—water resources in Australia, and the management of these resources. The former provides information on such topics as the geographic background to water resources, surface and groundwater supplies and use and the drainage divisions in Australia. The latter summarises Australian and State assessment and management of water resources.

For information concerning general, descriptive and historical matter *see* Year Book No. 37, pages 1096–1141 and Year Book No. 51, pages 228–31.

An article on droughts in Australia appeared in Year Book No. 54, pages 991–6.

Introduction

Rainfall, or the lack of it, is the most important single factor determining land use and rural production in Australia. The chapter Climate and Physical Geography of Australia contains details on geographical and climatic features that determine the Australian water pattern. Australia is the driest continent in the world. The scarcity of both surface and groundwater resources together with the low rates of precipitation, which restrict agriculture (quite apart from economic factors), has led to extensive programs to regulate supplies by construction of dams, reservoirs, large tanks and other storages.

Geographic background

General. Water resources are determined by rainfall, evaporation and physical features including soil, vegetation and geology. Chapter 2, Climate and Physical Geography of Australia, contains a detailed description of the climatic features of the country. A brief description of the landforms appears in Year Book No. 61, pages 25–27. In assessing Australia's water resources, dependability and quality of supply must be considered, as well as amount.

Topography. The major topographical feature affecting the rainfall and drainage patterns in Australia is the absence of high mountain barriers; features range from sloping tablelands and uplands along the east coast Main Divide through the low plain and marked depression in the interior to the Great Western Plateau.

Drainage. Only one-third of the Australian land mass drains directly to the ocean, mainly on the coastal side of the Main Divide and inland with the Murray-Darling system. With the exception of the latter, most rivers draining to the ocean are comparatively short but account for the majority of the country's average annual discharge.

The interior lowlands exhibit endoreic drainage patterns and surface drainage is totally absent from some arid areas of low relief.

Climate. Australia's large area (7.7 million square kilometres) and latitudinal range (3,700 kilometres) have resulted in climatic conditions ranging from the alpine to the tropical. Two-thirds of the continent is arid or semi-arid, although good rainfalls (over 800 mm annually) occur in the northern monsoonal belt under the influence of the Australian-Asian monsoon and along the eastern and southern highland regions under the influence of the great atmospheric depressions of the Southern Ocean. The effectiveness of the rainfall is greatly reduced by marked alternation of wet and dry seasons, unreliability from year to year, high temperatures and high potential evaporation.

Settlement. The availability of water resources controls, to a large degree, the possibility and density of settlement; these, in turn, influence the quality of the water through production and disposal of waste. Most early settlements were established on the basis of reliable surface water supplies and, as a result, Australia's population is concentrated along the coast, mainly in the comparatively fertile, well-watered east, south-east and far south-west.

As settlement spread into the dry inland grazing country, the value of reliable supplies of underground water was realised. Observations of the disappearance of large quantities of the rainfall precipitated on the coastal ranges of eastern Australia eventually led to the discovery of the Great Artesian Basin which has become a major asset to the pastoral industry. Development, however, has not been without costs. Significant environmental degradation and deterioration in water quality are becoming evident.

For further information on the influence of water resources on the spread of settlement in Australia *see* Year Book No. 61, page 860.

Surface supplies

Distribution and volume. As described above, permanent rivers and streams flow in only a small part of the continent. The average annual discharge of Australian rivers has been recently assessed at 440×10^9 cubic metres, of which 120×10^9 cubic metres is now estimated to be exploitable for use on a sustained yield basis. This is small in comparison with river flows on other continents. In addition, there is a pronounced concentration of runoff in the summer months in northern Australia while the southern part of the continent has a distinct, if somewhat less marked, winter maximum.

Variability of flow. Even in areas of high rainfall, large variability in flow means that, for local regional development, most streams must be regulated by surface storage. However, in many areas evaporation is so great that storage costs are high in terms of yield. Extreme floods also add greatly to the cost of water storage, because of the need for adequate spillway capacity.

Potential development. Some 85 per cent of all water used in Australia is surface water. This quantity is about 15×10^9 cubic metres a year and represents about 13 per cent of the possible usable surface water available in Australia; it does not include the amount diverted for hydro-electric power generation and other instream purposes which does not affect the quantity of water available. However, the great variability of river discharge, high evaporation, lack of sites for storage on many catchments, and economic considerations limit potential development. There is, however, considerable scope for greater efficiency in water use.

Groundwater supplies

Groundwater is more important than surface water in about 60 per cent of the country. Australia's estimated sustainable groundwater yield is 72×10^9 cubic metres, and annual groundwater usage is estimated at about 2.5×10^9 cubic metres.

Groundwater is divided according to its occurrence in the three main classes of aquifer:

(i) *Shallow unconsolidated sediments* comprise alluvial sediments in river valleys, deltas and basins; aeolian (windblown) sediments which generally occur in coastal areas; and lacustrine (lake) sediments. These sediments are often highly permeable and porous. Permeability and porosity may vary markedly according to orientation. Unconsolidated aquifers of this group generally occur at depths of less than 150 m and are often readily accessible to sources of water for recharge. Marked seasonal variations in water level are common.

(ii) *Sedimentary rocks* are generally made up of consolidated sediments. The aquifers owe their porosity to small voids between the grains which are often well compacted and cemented. They often cover significant areas, being continuous and of appreciable thickness. Rock strata usually dip quite gently. Nevertheless, over the full extent of the larger sedimentary basins, aquifers may reach great depths. Areas where recharge takes place may be small in relation to the extent of the aquifers. Water quality in individual aquifers may be quite good and fairly uniform over large areas. Some sediments contain a number of permeable and impermeable layers, creating a vertical sequence of separate aquifers, and water quality may vary greatly between them.

(iii) *Fractured rocks* comprise hard igneous and metamorphosed rocks which have been subjected to disturbance and deformation. Aquifers resulting from the weathering of any rock type are also included in this group. Water is transmitted mainly through joints, bedding planes, faults, caverns, solution cavities and other spaces in the rock mass.

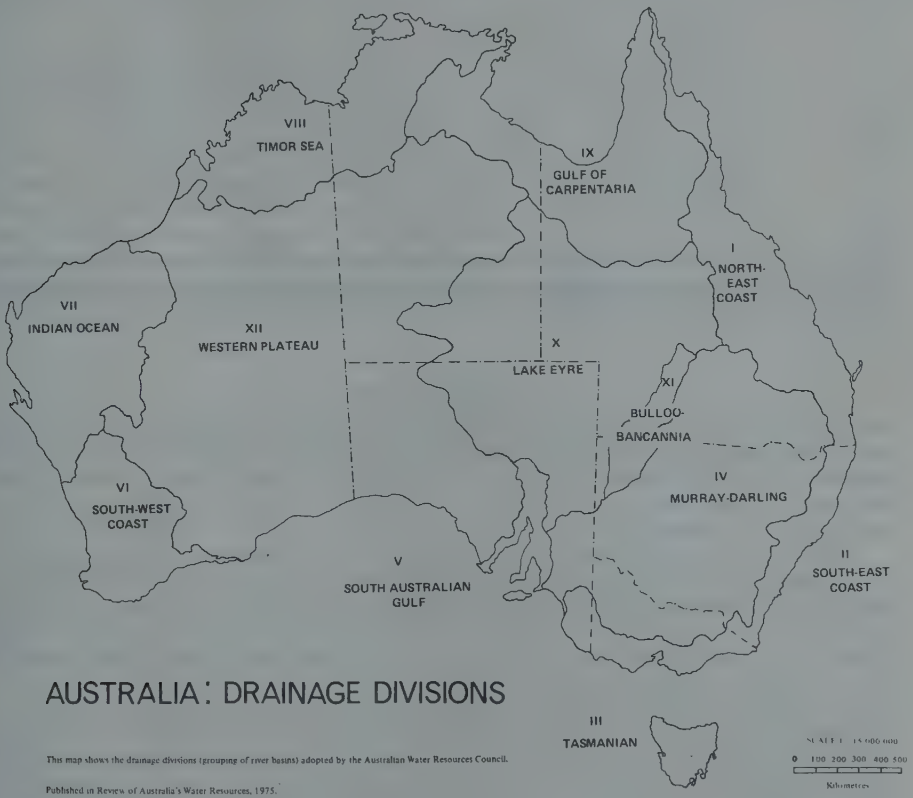
The quality of groundwater varies considerably and sources are subject to pollution in much the same way as surface supplies. As a general rule, groundwater from shallow unconsolidated sediments is of good quality but there are instances where groundwater has been polluted, particularly around major urban centres, by sewerage effluent, drainage from refuse tips and from specific industrial pollutants. Supplies from sedimentary basins and fractured rocks are more variable in both quality and quantity, especially in the more arid regions of the continent. High nitrate concentrations tend to be a common occurrence in groundwaters in northern and central Australia.

For further details on the sources of groundwater and a table of the principal water-bearing basins in Australia, *see* Year Book No. 61, pages 865–6. A map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

Drainage divisions and the use of surface and groundwaters

To promote a unified approach, river basins or groups of river basins have been adopted as the primary units of assessment. The *Review of Australia's Water Resources* 1975 (Department of National Development and Energy, Australian Water Resources Council, Canberra) contains a summary of the 244 river basins grouped into twelve divisions, together with a map showing the divisions. (*See* below.)

The conjunctive approach to water resources, even to importing water from outside the region, generally makes more water available for use than would be the case with independent use of the various sources. Year Book No. 61, pages 867–8 contains details of the conjunctive use of surface and groundwaters.


VIII
TIMOR SEA
IX
GULF OF
CARPENTARIA
I
NORTH-
EAST
COAST
VII
INDIAN OCEAN
XII
WESTERN PLATEAU
X
LAKE EYRE
XI
BULLOO-
BANCANNIA
IV
MURRAY-DARLING
VI
SOUTH-WEST
COAST
V
SOUTH AUSTRALIAN
GULF
II
SOUTH-EAST
COAST
III
TASMANIAN
SCALE 1 : 15 000 000
0 100 200 300 400 500
Kilometres

AUSTRALIA: DRAINAGE DIVISIONS

This map shows the drainage divisions (grouping of river basins) adopted by the Australian Water Resources Council.

Published in Review of Australia's Water Resources, 1975.

PLATE 39

In a recent report on Australia's water resources—*Water 2000*, Department of Resources and Energy, Canberra 1983 the exploitable yield of surface water for each river basin (aggregating to Drainage Divisions) at the point of lowest practical downstream development, using the type of hydraulic structure considered technically feasible has been re-assessed. These estimates take into account average annual flow, variability of flow, water quality and the availability of suitable sites for storage, but do not take into account economic factors.

SURFACE WATER: ESTIMATES OF RUNOFF, TOTAL POSSIBLE EXPLOITABLE YIELD AND CURRENT USE BY DRAINAGE DIVISIONS

Sources: Snowy Mountains Engineering Corporation 1983; Australian Water Resources Council 1981

		Surface water (million ML per annum)			
Drainage division		*Runoff*	*Total possible exploitable yield(a)*	Use(*b*)	*Use as percentage of exploitable* yield(%)
I	North-East Coast	91	26	0.9	3
II	South-East Coast	45	15	2	13
III	Tasmania	53	35	0.3	1
IV	Murray-Darling	23	13	11	85
V	South Australian Gulf	1	0.3	0.1	33
VI	South-West Coast	7	2	0.4	20
VII	Indian Ocean	4	0.2	ns	—
VIII	Timor Sea	81	16	0.1	1
IX	Gulf of Carpentaria	131	10	ns	—
X	Lake Eyre	3	0.1	ns	—
XI	Bulloo-Bancannia	1	ns	ns	—
XII	Western Plateau	ns	ns	ns	—
Australia	. . . .	**440**	**117.6**	**14.8**	**13**

(*a*) Exploitable yield is estimated total divertible fresh and marginal water at the lowest practicable point of impoundment, taking account of technical factors but not economic, environmental or social constraints. (*b*) Urban, industrial and agricultural uses of water only. In-stream uses such as hydro-electric generation are not included.
ns = not significant.

Water quality

The quality of surface waters in Australia varies greatly and is controlled by climate, geology, stream flow rates, biological activity and land use. Most of the variability is related to water events such as storm flows, floods and drought. Water pollution is generally at a low level compared to other similarly developed countries. The great majority of Australians enjoy domestic, irrigation and recreational waters of good to excellent quality.

Very little is known of the water quality conditions which prevailed prior to European settlement and development in Australia. It is thus difficult to judge the full impact of urban, agricultural, industrial and mining developments, and the effects that water resource development measures, such as large dams, have had on the quality of the resource. Levels of toxic pollutants have undoubtedly increased, as have the salt and sediment loads of the rivers. While water quality would, at times, have been poor prior to settlement, quality levels are believed to have generally declined. On the other hand, regulation of major rivers has reduced some of the water quality impacts of floods and droughts.

A better appreciation of water quality in recent times has led to much improved management. Measurable improvements in water quality over the last decade have resulted from pollution controls in industry and mining, and more effective sewage treatment. Means of control of pollution from widespread agricultural activity such as problems of salinity and turbidity, are under development.

The major water quality issues and problems faced in Australia are salinity, turbidity, excessive plant and algal growths (eutrophication), and water treatment for small community water supplies. There is also a lack of data, information and research on all aspects of water quality and the protection of aquatic species and habitats. Many of the severe pollution problems found in other countries have been avoided in Australia, because of the general absence of highly polluting industries and the location of major cities on or near the coastline enabling ocean disposal of wastes.

Groundwater is an important substitute for surface water in many parts of the country such as in the arid interior where the Great Artesian Basin provides the only reliable continuous supply of water for stock and domestic purposes. This Basin underlies 23 per cent of the continent but the high ratio of sodium to calcium and magnesium ions has an adverse effect on soil structure, rendering it impervious and generally unsuitable for irrigation.

Groundwater is increasing in importance as a source of water for irrigation, industry and domestic supply. The possible yield and use of groundwaters in the twelve drainage divisions is shown below.

Increasing use is made of conjunctive schemes, for example, where groundwater supplies are tapped to augment surface water or where, as in the Burdekin Delta, groundwater aquifers are artificially recharged during the summer wet season to enable water to be stored at low cost with negligible evaporation.

GROUNDWATER ESTIMATES OF TOTAL POSSIBLE YIELD AND CURRENT USE BY DRAINAGE DIVISION

Sources: Bureau of Mineral Resources 1983; Australian Water Resources Council 1981

Drainage division		*Groundwater (million ML per annum)* *Total possible yield (a)*	*Use (b)*	*Use as percentage of possible yield (%)*
I	North-East Coast	3	0.7	23
II	South-East Coast	4	0.5	13
III	Tasmania	16	ns	—
IV	Murray–Darling	6	0.8	13
V	South Australian Gulf	0.03	0.08	267(*c*)
VI	South-West Coast	2	0.2	10
VII	Indian Ocean	0.3	0.05	17
VIII	Timor Sea	21	0.03	0.1
IX	Gulf of Carpentaria	14	0.02	0.1
X	Lake Eyre	2	0.02	1.0
XI	Bulloo–Bancannia	0.05	ns	—
XII	Western Plateau	2	0.03	2.0
Australia		**70.38**	**2.43**	**3.5**

(*a*) Potential yield is annual recharge plus depletion of the aquifer at a rate of 1% per annum. Fresh groundwater has less than 1000 parts per million total dissolved solids. (*b*) Urban, industrial and agricultural uses only of water of any quality. (*c*) Includes use of a significant proportion of marginal and brackish water. If groundwater in excess of 1000 parts per million total dissolved solids were included, the ratio would be 88%. ns = not significant

The first *National survey of water use in Australia*, published in 1981, gathered water use data on a national scale. The data provides a sound basis for the efficient utilisation of existing resources and for the planning of future projects. A summary of the results of the survey is given in the table below.

ESTIMATED ANNUAL WATER USE IN 1977 FOR AN AVERAGE CLIMATIC YEAR BY DRAINAGE DIVISION

(*Source*: The first *National survey of water use in Australia*; Department of National Development and Energy; Australian Water Resources Council, Occasional Papers Series No. 1; AGPS 1981)

Drainage division	*Surface waters (10^6M^3)*				*Ground waters (10^6M^3)*				*Totals (10^6M^3)*			
	Urban industrial	*Irrigation*	*Other rural*	*Total*	*Urban industrial*	*Irrigation*	*Other rural*	*Total*	*Urban industrial*	*Irrigation*	*Other rural*	*Total*
North-East Coast	388	473		861	40	670	–	710	427	1,210	126	1,770
South-East Coast	1,400	453	186	2,030	125	368	52	545	1,540	821	238	2,590
Tasmania	157	110	25	292	0.5	–	–	0.5	157	110	25	292
Murray-Darling	287	10,200	491	11,000	42	504	233	778	337	10,700	775	11,800
South Australian Gulf	37	24	10	70	9	63	7	79	222	88	29	339
South-West Coast	187	224	20	431	182	24	5	210	369	248	25	642
Indian Ocean	0.5		1	1	36	6	5	47	36	6	6	48
Timor Sea	14	67	6	87	15	0.5	10	25	29	68	19	115
Gulf of Carpentaria	20	2	–	22	15	0.5	1	16	35	2	37	73
Lake Eyre	2	1	2	5	10	1	5	16	13	1	43	57
Bulloo-Bancannia	–	–	–	–	–	–	–	–	1	–	3	4
Western Plateau	0.5	–	1	1	5	2	19	26	21	2	22	44

NB: Totals may not be the sum of the figures in any row or column as figures have been rounded, and water sources such as farm dams, not falling in the categories of surface or groundwater, have been included in the totals section.

Total water use (gross applied water) in Australia for 1977, adjusted for average climatic conditions, has been estimated at 17 800 x 10^6 cubic metres annually, corresponding to an overall total per capita use of about 3,500 litres per day. Of this total, approximately 74 per cent is for irrigation, 18 per cent is for urban/industrial uses and 8 per cent is for other rural water use. Withdrawals for hydro-electric power have not been included. In terms of sources for the water used, by far the largest proportion (about 84 per cent) of water is drawn from surface water sources. Groundwater sources, although of importance in some regions, account for only 14 per cent of the water used. A very small proportion, less than 0.5 per cent of water used is derived from artificial recharge or from reclaimed water. Sources for the remaining water used were not indicated and would include supplies from small bores, rainwater tanks, farm dams and the like. Of the total surface water withdrawals, 77 per cent are used for irrigation, 18 per cent for urban/industrial purposes and 5 per cent for other rural purposes. Corresponding figures for groundwater withdrawals are 67 per cent, 18 per cent and 14 per cent respectively.

Major dams and reservoirs

A map entitled *Australia—Dams and Storages*, published in 1975 by the Department of Minerals and Energy, shows the location, height of dam wall, capacity and purpose of Australia's major dams and water storages. In the lists below, only dams with a gross reservoir capacity of more than 100 million cubic metres have been included. It should be noted that the Hume Reservoir lies on the New South Wales-Victoria border.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name and year of completion	*Location*	*Gross capacity (million cubic metres) (a)*	*Height of wall (metres) (b)*	*Purpose*
		NEW SOUTH WALES		
Eucumbene (1958)	Eucumbene River	4,807	116	Part of Snowy Mountains H/E Scheme
Hume (1936, 1961)	Murray River, near Albury	3,038	51	Irrigation, water supply, H/E
Warragamba (1960)	Warragamba River	2,057	137	Water supply for Sydney, H/E
Menindee Lakes (1960)	Darling River, near Menindee	1,794	18	Conservation, storage for Murray River Agreement
Burrendong (1967)	Macquarie River, near Wellington	1,677	76	Conservation, FC, water supply
Blowering (1968)	Tumut River	1,628	112	H/E, irrigation
Copeton (1976)	Gwydir River	1,364	113	Irrigation
Wyangala (1936, 1971)	Lachlan River	1,220	85	Irrigation, stock, etc.
Burrunjuck (1927, 1956)	Murrumbidgee River	1,026	79	Irrigation, H/E
Talbingo (1971)	Tumut River	921	162	H/E
Jindabyne (1967)	Snowy River	688	72	H/E
Lake Victoria (1928)	Murray River, near S.A. border	680	—	Conserves supplies for S.A.
Keepit (1960)	Namoi River, near Gunnedah	423	55	Conservation, irrigation, H/E
Glenbawn (1958)	Hunter River, near Scone	360	78	Conservation, irrigation, FC
Glennies Creek (1983)	Hunter Valley, near Singleton	284	67	Industrial, irrigation stock and domestic water supply.
Tantangara (1960)	Murrumbidgee River	254	45	H/E
Avon (1927)	Avon River	214	72	Water supply for Sydney
Mangrove Creek (1983)	Mangrove Creek, near Gosford	176	79	Water supply
Grahamstown (1969)	Grahamstown, near Newcastle	153	12	Water supply
Lake Brewster (1952)	Lachlan River, near Hillston	150	-	Irrigation
Liddell (1968)	Gardiner Creek, near Muswellbrook	148	41	Cooling water for thermal electricity generation
Tallowa (1977)	Shoalhaven River, near Nowra	135	43	Water supply for Sydney
Googong (1978)	Queanbeyan River	125	59	Water supply for Canberra-Queanbeyan
		VICTORIA		
Dartmouth (1979)	Mitta Mitta River	4,000	180	Irrigation storage, H/E
Eildon (1927, 1955)	Upper Goulburn River	3,392	79	Irrigation, H/E
Waranga (1910)	Near Rushworth (Swamp)	411	12	Irrigation
Mokoan (1971)	Winton Swamp, near Benalla	365	10	Irrigation
Rocklands (1953)	Glenelg River	336	28	Domestic and stock water supply
Eppalock (1964)	Campaspe River	312	45	Irrigation, water supply
Cardinia (1973)	Cardinia Creek, near Emerald	287	79	Water supply for Melbourne
Upper Yarra (1957)	Yarra River	207	89	Water supply for Melbourne
Glenmaggie (1927, 1958)	Macalister River	190	37	Irrigation
Cairn Curran (1958)	Loddon River, near Newstead	149	44	Irrigation
Yarrawonga (1939)	Murray River	117	22	Irrigation
Toolondo (1952,1960)	Natural depression, near Horsham	107	-	Domestic and stock water supply

For footnotes *see* end of table

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name and year of completion	*Location*	*Gross capacity (million cubic metres) (a)*	*Height of wall (metres) (b)*	*Purpose*
		QUEENSLAND		
Fairbairn (1972)	Nogoa River, central Qld	1,440	49	Irrigation, industrial
Somerset (1959)	Stanley River	893	50	Water supply for Brisbane, H/E
Fred Haigh (1975)	Kolan River, near Gin Gin	586	52	Irrigation
Ross River (1974)	Near Townsville	417	35	FC, water supply
Tinaroo Falls (1958)	Barron River	407	47	Irrigation, H/E
Glenlyon (1976)	Pike Creek, near Stanthorpe	254	62	Irrigation
Boondooma (1983)	Boyne River, near Proston	212	50	Cooling water (power)
North Pine (1975)	North Pine	205	44	Water supply, recreation
Koombooloomba (1961)	Tully River	201	52	H/E, irrigation
Wuruma (1968)	Nogo River, near Eidsvold	194	46	Irrigation
Eungella (1969)	Broken River	131	46	Irrigation, industrial, mining, water supply
Julius (1977)	Leichhardt River, near Mt Isa	127	35	Water supply, mining
Lake Moondarra (1957)	Leichhardt	107	27	Water supply, recreation
Beardmore (1972)	Balonne River	101	15	Irrigation, water supply
		WESTERN AUSTRALIA		
Lake Argyle (Ord) (1971)	Ord River, near Kununurra	5,720	99	Irrigation, FC, H/E
South Dandalup (1973)	Near Dwellingup	208	41	Water supply for Perth
Wellington (1933, 1944, 1960)	Collie River	185	37	Irrigation, water supply
Serpentine (1961)	Serpentine River	185	55	Water supply for Perth
		TASMANIA		
Lakes Gordon and Pedder (1974)				
Gordon	South West	11,728	140	H/E
Scotts Peak	South West	2,963	43	H/E
Serpentine	South West		38	H/E
Edgar	South West		17	H/E
Miena (1967)	Great Lake	2,390	18	Storage for H/E
Lake St Clair (1938)	Central Plateau	2,000 (est.)	3	Natural storage for H/E
Mackintosh (1980)	Mackintosh River, near Queenstown	922	75	H/E
Tullibardine (1979)	Tullibardine River, near Queenstown		25	H/E
Lake Echo (1956)	Lake Echo	725	19	H/E
Arthur's Lake (1965)	Source of Lake River, near Great Lake	571	17	H/E
Lake King William (Clark) (1949, 1966)	Derwent River	540	67	H/E
Devils Gate (1969)	Forth River, near Devonport	180	84	H/E
Rowallan (1967)	Mersey River	130	43	H/E
Cethana (1971)	Forth River, near Devonport	108	110	H/E
		NORTHERN TERRITORY		
Darwin River (1972)	Darwin River	259	31	Water supply for Darwin

(*a*) Includes 'dead water', i.e., water below the operational outlet of the reservoir. (*b*) As a general rule, the figures shown for height of wall refer to the vertical distance measured from the lowest point of the general foundation to the crest of the dam, i.e., the level of the roadway or walkway on the dam.

ABBREVIATIONS: H/E hydro-electricity, FC Flood control and/or mitigation.

MAJOR DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED

Name	*Location*	*Gross capacity (million cubic metres)(a)*	*Height of wall (metres)(b)*	*Purpose*
	UNDER CONSTRUCTION			
Burdekin Falls Dam	Burdekin River, Qld	1,860	68	Irrigation
Wivenhoe	Brisbane River, near Fernvale, Qld	1,150	58	Water supply, FC, H/E
Thomson	Thomson River, near Erica, Vic.	1,110	160	Water supply, irrigation
Lower Pieman	Pieman River, near Queenstown, Tas.	641	122	H/E
Split Rock	Manilla River, Namoi Valley N.S.W.	370	64	Irrigation
Windamere	Cudgegong River, near Mudgee, N.S.W.	353	69	Irrigation
Awoonga High Dam	Boyne River, south of Gladstone, Qld	255	46	Water supply, cooling water (power)
Blue Rock	Tanjil River, near Willow Grove, Vic.	200	75	Cooling water (power), domestic and industrial
Bastyan (Lake Rosebery)	Pieman River, near Queenstown, Tas.	125	75	H/E
Harding Dam	Harding River, W.A.	114	42	Water supply
Leslie Dam (Stage II)	Sandy Creek, near Warwick, Qld	108	34	Irrigation, water supply
	PROJECTED			
Lake Mejum	Murrumbidgee River (offstream), N.S.W.	450	n.a.	Irrigation
Spencer	Denison Creek, near Nebo, Qld	127	24	Mining, water supply
Bjelke-Petersen	Barker Creek, near Murgon, Qld	125	33	Irrigation

For footnotes and abbreviations *see* previous table.

Water management

Australia's water resources are managed by a multitude of irrigation authorities, metropolitan water boards, local government councils and private individuals. State authorities dominate the assessment and control of water resources as, under the Commonwealth Constitution, primary responsibility for management of water rests with the individual State governments. The Commonwealth Government is responsible for matters relating to its Territories, and participates indirectly through financial assistance or directly in the co-ordination or operation of interstate projects through bodies such as the River Murray Commission. In other instances where political boundaries intersect some river basins, co-operation between governments has been necessary to develop resources.

Australia's attitudes to water resources management have changed substantially over the last twenty years. Water management is no longer seen just in terms of storing water and regulating streams for consumption, but also in terms of conserving unregulated streams in an unmodified landscape for wild life preservation or recreation purposes or for possible social or economic use by future generations. In addition, agricultural, industrial and urban development has led to greater attention being paid to water quality management.

The development of water resources in the States has an important bearing on the Commonwealth's broad interests in economic management, resource allocation, foreign exchange earnings, distribution of income and related matters. Consequently, the Commonwealth has participated in water resource matters in the States in instances of mutual Commonwealth/States concern or in the national interest. The National Water Resources Program (which commenced in 1978-79) involves financial assistance to the States for projects and programs of national significance or special circumstances, to which the States attach a high priority. Funds are available under the Program for projects relating to water supplies for urban and rural areas, including re-use; water quality management, flood mitigation and management; broad regional planning and management investigations; resources assessment; and salinity control and drainage projects.

In May 1983, the Commonwealth Government announced the establishment of a Community Employment Program under which funds will be provided for worthwhile community infrastructure, facilities and services aimed at stimulating employment. Under this Program $20 million will be available for water supply improvement projects in country towns.

A number of key water issues relating to the development and management of Australia's water resources are already receiving close attention: others are expected to emerge in the near future. Some relate to water quality, including that resulting from irrigation-induced and dryland salinisation, specific and widespread sources of pollution in both urban and agricultural areas, aquatic weeds, levels of treatment for urban water supplies, and the cost and technology of water re-use.

Water resources readily accessible to centres of demand are already substantially committed, although there is a widespread recognition of the considerable scope which still exists for increased efficiency in the use of existing supplies. However, on a local or regional basis, the availability of adequate water supplies is becoming a key factor in continuing economic development. It appears inevitable that new supplies, in certain situations, will depend on the processing of water resources of marginal quality and waste water to acceptable standards for domestic and industrial use. In turn, this will generate pressures for the development of more advanced water treatment technologies.

Perspective on Water Resources to the Year 2000 Study

The 'Water 2000' study, commissioned by the Commonwealth Government early in 1982, has now been completed and the Report is available to the public. The study was wide-ranging and a number of consultants were engaged to investigate particular aspects of the industry and water-related issues. The study aimed to present a perspective on Australia's water resources to the end of the century against a background of potential supplies and expected demand, and to identify those water and water-related issues to be considered in planning to the year 2000.

Research and continuing assessment of water resources

Australian Water Resources Council (AWRC)

The Australian Water Resources Council was established in 1963 by joint action of the Commonwealth and State Governments. The Council consists of the Commonwealth and State Ministers who have primary responsibility for water resources; it is chaired by the Commonwealth Minister for Resources and Energy.

The Council provides a forum for the exchange of views on water-related issues, and has been instrumental in promoting co-operation and collaboration on matters of mutual interest to its members. Its terms of reference include the promotion of programs to assess Australia's water resources, the encouragement of education and training in hydrology, the co-ordination and dissemination of information, the promotion of water research and development of liaison with overseas and international organisations in the field of water resources.

The Council is supported by a Standing Committee of permanent heads of relevant State and Commonwealth departments and authorities, and by six permanent technical committees and various fixed-term working groups and panels. Permanent technical committees have been established to tackle ongoing issues in groundwater, surface water, water quality management, catchment management, planning and management, and research and development, while working groups have examined such issues as research needs, education and training and the problem of aquatic weeds.

See Year Book No. 61, page 869 for further details on the work of the AWRC.

In 1964 in response to a perceived lack of water resouces data in all States the Commonwealth Government instituted through the AWRC the National Water Resources Assessment Program. The original aim was to expand the stream gauging network in Australia and increase the level of groundwater knowledge. In 1976 the collection of water quality data was added to the program. The program has been successful in filling many of the data gaps which existed prior to 1964 and in providing data and information for water resources planning, construction projects and in the development of the understanding of the nature and function of Australia's water resources. The program has been reviewed and a new program designed to meet changing and emerging water data needs will commence in 1984-85.

Water resources research

The Department of Resources and Energy is primarily responsible for the Commonwealth interests in water resource matters, including research policy and co-ordination at the Commonwealth level. The Department does not perform research, but has provided funds for and has administered a water research program on behalf of the Australian Water Resources Council (AWRC). In 1982-83, $600 000 was made available to the program to support projects of 2-3 years duration in fields such as non-point sources of pollution, aquatic biology, salinity, effluent treatment, drinking water quality, reservoir management, evapo-transpiration and new instruments and techniques. The AWRC is the major mechanism for the development of Commonwealth/State collaborative water programs.

Water research is undertaken at the Commonwealth level by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Bureau of Meteorology, the Australian Atomic Energy Commission (AAEC) and the Bureau of Mineral Resources, Geology and Geophysics (BMR). The water research programs of these major national agencies are coordinated through a Water

Research Liaison Committee which advises the Ministers of Resources and Energy and of Science and Technology on water research in Commonwealth Government agencies.

At the State level, water agencies have extensive laboratory facilities for water quality testing. However, most water related research is undertaken in research centres associated with agriculture, fisheries, forestry and environmental authorities. At the regional level, some of the larger authorities providing water supply and sewerage services undertake applied research on a very limited scale.

A significant proportion of Australian water research is undertaken by researchers in tertiary education institutions (see the first Table below) with the aid of either internal funding or grants from outside bodies, such as the AWRC or the Australian Research Grants Committee. Water research is carried out within a range of disciplines, including the biological and social sciences and engineering. The major sources of research funds for all sectors are shown in the second Table below.

Separate reviews of water research were undertaken by the AWRC, CSIRO and BMR in 1981-82. CSIRO has announced organisational changes which provide a more appropriate focus for water research within the organisation. As a result of recommendations arising from a second AWRC working group report, the previous Government decided to establish a National Water Research Council (NWRC) to provide advice on research needs and priorities, and a National Water Research Program to fund water research. Recently, the present Government decided to establish an Interim Council to examine the need for and possible role of an Institute of Freshwater Studies. The Interim Council is expected to report to the Government about the middle of 1984.

SOURCE AND USE OF FUNDS FOR WATER RESEARCH IN 1979
($'000)

	Research performed by					
Source of research funds	*Commonwealth agencies*	*State agencies*	*Local government agencies*	*Universities and tertiary institutions*	*Private sector*	*Total funds on a source basis*
Commonwealth Government	6,050	540	23	1,580	50	8,243
State governments	80	4,785	17	430	—	5,312
Local governments	—	45	740	8	4	797
Private sector	—	85	—	140	190	415
Total expenditure on research on a use basis	**6,130**	**5,455**	**780**	**2,158**	**244**	**14,767**

DISTRIBUTION OF 1979 WATER RESEARCH BETWEEN VARIOUS GROUPS OF ORGANISATIONS IN TERMS OF $, MANPOWER, AND NUMBERS OF PROJECTS

Organisations	*1979 Manpower requirements of projects (man-years)*	*1979 expenditure on projects ($'000)*	*Number of projects*	*Average 1979 expenditure per project $*	*1979 Man-year per project*
COMMONWEALTH GOVERNMENT AGENCIES					
AAEC	38	1,440	15	96,000	2.53
CSIRO	134	3,730	74	50,000	1.81
Other	36	960	35	27,500	1.03
STATE GOVERNMENT AGENCIES					
Water Agencies	25	805	53	15,000	0.47
Other	165	4,650	197	23,500	0.84
LOCAL GOVERNMENT AGENCIES	26	780	23	34,000	1.13
UNIVERSITIES ETC.	186	2,158	228	9,600	0.81
PRIVATE SECTOR	11	244	13	19,000	0.87

Water research by the CSIRO can be grouped under the following broad headings:

Water resource management. The aims of programs in this area are to develop ecologically sound methods for the management of irrigation water distribution systems and associated surface waters and to develop integrated methods of managing aquatic plants.

Groundwater research. The physical, chemical and biological processes affecting the quantity and quality of groundwater are being investigated. Included are studies of natural interactions between surface water, groundwater, soils and rocks, and responses to man's activities such as mining, waste disposal, agriculture, artificial recharge and pumpage.

Land management for water resources. Included in this area are studies of the processes involved in the movement of chemical pollutants and soluble salts from land to water resources, research into methods for controlling the quality of water resources by manipulating land and vegetation, investigations of processes involved in the recharge of water-table aquifers, and an analysis of the decision-making process in the management of land and water resources.

Hydrology and climatology. The objectives of research in this area are to advance the knowledge and basic understanding of hydrologic and climatic systems and processes and to develop better methods of collecting and presenting information about water resources and climate and assessing their use, potential and limitations. In addition, the application of soil physics theory on movement of water in soils is being extended to the scale of landscape units and catchments.

Water and wastewater purification. A variety of projects are underway in this area, with the major emphasis on cheaper physicochemical processes for upgrading low quality natural waters by the use of magnetic reagents. These include the removal of turbidity and colour with magnetic iron oxide particles (the Sirofloc process) and the removal of soluble impurities by simplified continuous ion-exchange processes such as dealkalization, softening and Sirotherm desalination, all based on magnetic micro-resins. Large-scale demonstration plants have been constructed for the Sirofloc and Sirotherm processes. The new processes are also applicable to industrial wastewaters and should facilitate water recycling in industry.

Research on sewage treatment is concentrated on the development of energy-saving biological processes which produce less sludge but remove nitrogen compounds efficiently, and on the reliable removal of phosphate by microbes. The level and influence of non-biodegradable compounds in wastewaters are also under study.

International aspects

International water organisations

Australia liaises with international bodies and United Nations agencies concerned with water resources and participates in their activities in various ways.

Economic and Social Commission for Asia and the Pacific (ESCAP). This United Nations Commission, through its committee on Natural Resources, reports on water policy issues in addition to other activities. By participation in this conference and in seminars arranged on selected topics, Australia contributes to, and benefits from, identification of and discussions on the main problems of water resources management in a densely populated, developing region. Australia is also an active participant in ESCAP's water information exchange system.

Organisation for Economic Co-operation and Development (OECD). Australia's membership of the OECD since 1970 has involved participation in the work of Water Management Group which investigates and rationalises problems which are the subject of international concern, and develops strategies—economic, legal and technical—which might resolve them.

United Nations Educational, Scientific and Cultural Organization (UNESCO). Australia has contributed to the international program designed to advance the science and practice of hydrology, International Hydrology Program (IHP), through an Australian UNESCO Committee for the IHP.

World Meteorological Organization (WMO). Through its Commission for Hydrology, WMO is the specialised UN agency dealing with operational hydrology—the measurement of basic hydrological elements, water resources assessment and hydrological forecasting. WMO has an Operational Hydrology Program (OHP) which is co-ordinated with and complemented by UNESCO's IHP. Within the OHP is the Hydrological Operational Multipurpose Subprogram (HOMS) involving the organised transfer of hydrological technology among members. Australia is a contributor to HOMS and has established a HOMS National Reference Centre within the Secretariat of the Australian Water Resources Council (AWRC). In Australia, hydrological and meteorological activities relative to water resources are co-ordinated by the AWRC for the Permanent Representative of WMO in Australia, the Director of Meteorology.

United Nations Environment Program (UNEP). Australia participates in a world registry of major rivers covering discharge and pollutants and of clean rivers so defined and in the development of methodology for analysis and planning of water resources management.

World Health Organisation (WHO). Australia is participating in the water quality monitoring component of the WHO Global Environmental Monitoring System (GEMS) which provides a consistent global overview of changes in water quality.

National and interstate agreements

In the section on *Water Management* above, reference was made to the responsibilities of government on the national, state and local authority levels. In this section, some additional details are provided on their roles in the management of water resources.

The Murray-Darling Drainage Division's surface water resources are the most highly developed in Australia, with 85 per cent of the possible exploitable yield currently committed for use. The Division contains the continent's largest river system which can be divided into three main groups of rivers:

(a) the Darling River and its tributaries;
(b) the Murrumbidgee River and its tributaries; and
(c) the Murray River and its tributaries upstream from the confluence of the Murrumbidgee and the Murray.

The river basins that comprise the area under the control of the River Murray Commission are the nine basins in group (c) above and the three basins adjacent to the lower reaches of the Murray.

River Murray Waters Agreement

The *River Murray Waters Act* 1915 ratified an Agreement between the Commonwealth and the States of New South Wales, Victoria and South Australia. The Commonwealth Department of Resources and Energy is responsible for the Commonwealth's interest under the Act. Year Books prior to No. 39 contain a number of summaries of the historical events leading to the Agreement of 1914 which provided for a minimum quantity of water to pass to South Australia. Further details on the River Murray Waters Agreement and subsequent amendments may be found in Year Book No. 61, pages 870–2.

The River Murray Commission, established in 1917 to give effect to the Agreement is responsible for the management of the flow of water in the River Murray, the construction, maintenance and operation of storages and other regulatory works to make water available for irrigation, navigation, and urban purposes; and for the allocation of water between the States of New South Wales, Victoria and South Australia.

Dartmouth and Hume Reservoirs together with Lake Victoria and the Menindee Lakes storages, are the key storages operated by the River Murray Commission to regulate the River Murray system. A series of weirs along the river provide for irrigation diversions and pumping facilities by the three States. The major diversion weir is at Yarrawonga. All of the weirs except Yarrawonga have locks to enable navigation of the river to be maintained.

Towards the end of 1976, the four Governments agreed that the River Murray Commission should assume the function of co-ordinating water quality and quantity management of the River Murray to the extent of taking account of water quality in its operations and investigations, monitoring the quality of the river, and being authorised to make representations to the Contracting States on water quality issues.

A preliminary draft substitute Agreement prepared by the Commission in 1978 was accepted in principle by the four Contracting Governments as a basis for negotiations on a new Agreement. A major review of the Agreement (the first since 1914) was carried out in 1981 and endorsed by the four Governments. The signing of a new agreement by all four heads of Government was completed on 1 October 1982. By 30 June 1983, legislation had passed all stages in both Victoria and South Australia and final preparations were being made for introduction of the New South Wales Bill. The Commonwealth River Murray Waters Bill 1983) is currently (October 1983) before the Parliament.

The substitute Agreement expands the responsibilities of the River Murray Commission to include water quality in addition to water quantity in the main stem of the River and associated storages. The substitute Agreement also allows the Commission to have regard to the possible effect of its decisions on other water management objectives such as flood control, environment matters and recreation use. A particular feature is that the State Contracting Governments are required to advise the Commission of any proposal which could significantly affect the quality and quantity of the River Murray.

New South Wales–Queensland Border Rivers Agreement

This agreement came into effect in July 1947 and provided for the construction of a dam and several weirs on the rivers which constitute part of the boundary between the two States. This Act was amended in November 1968 to provide for storages on Pike Creek (Queensland) and the Mole River (New South Wales) and construction of further weirs on the Border Rivers and regulators on effluents of the Border Rivers and works for improvement of flow in streams which intersect the Queensland-New South Wales border west of Mungindi.

Glenlyon Dam on Pike Creek with a storage capacity of 261 million cubic metres was completed in 1976 and seven regulators on the Balonne-Culgoa River System have been constructed.

The Dumaresq-Barwon Border Rivers Commission, constituted of representatives of both States, administers the Agreement and the sharing of water.

Snowy Mountains Hydro-electric Scheme

This scheme was set up in 1949 by the Snowy Mountains Hydro-electric Power Act. Its prime purpose was to generate large quantities of peak load power and, by diverting the southern-flowing Snowy River through trans-mountain tunnels, to augment the flow of the Murray and Murrumbidgee Rivers to permit continuing expansion of irrigation in the fertile river plains. All storage works are now completed.

Details of the diversions and associated power works, together with details of construction, are given in Year Book No. 62, pages 444–448.

The Snowy Mountains Council, constituted of representatives of the Governments of the Commonwealth, New South Wales, Victoria and the Snowy Mountains Hydro-Electric Authority, administers the operation of the Scheme, including the timing and amounts of electricity generation and water releases.

States and Territories

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States, water policies tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria, almost every form of water scheme is in operation. In New South Wales the management of irrigation water supplies is an area of major emphasis, with approximately two thirds of a million hectares under irrigation. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock and the development of small irrigation schemes in sub-humid and humid areas, principally to stabilise production of such crops as tobacco, sugar, cotton and pastures. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with water supplies for population centres and mining and pastoral industries.

New South Wales

Administration

The Water Resources Commission, New South Wales, is a Statutory Authority formed in 1976 by a reconstitution of the Water Conservation and Irrigation Commission. Administrative authority is vested in the Chief Commissioner, who is assisted by two full-time Commissioners and two part-time Commissioners. All five are appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works. An important function of the Commission is planning for the co-ordinated development and allocation of the State's water resources. This entails the assessment and projection of demand for all purposes and also involves the quantitative and qualitative assessment of the available resources. Another important planning function relates to flood plain management. The Water Resources Commission Act, 1976, has widened the initiatives which the Commission is able to take in the fields of flood plain management and flood mitigation management. The search for, and surveillance of, groundwater for water supply is another important planning activity.

Under the Water Act, 1912 (as amended) the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage and prevention of inundation.

For particulars of the New South Wales–Queensland Border Rivers Agreement ratified by Acts of both States in 1947, *see* pages 334-335 of this chapter.

Schemes summarised

The bulk of irrigated land is along the Murray and its tributary, the Murrumbidgee, regulated by the Hume, Blowering and Burrinjuck dams. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, by the Menindee Lakes Storage on the Darling River, by Copeton Dam on the Gwydir River and by Chaffey Dam on the Peel River. None of the other rivers are regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places. In addition substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Area. Others are: Coomealla, Curlwaa, Hay, Tullakool, Buronga, Mallee Cliffs and Coleambally.

A detailed description of the Murrumbidgee Irrigation Area is contained in Year Book No. 61, pages 875–7. The Water Resources Commission controls land transactions and water supplies for the MIA, but has no jurisdiction over land transactions in neighbouring irrigation districts (although it is responsible for the operation and maintenance of the water supply in these areas). The other irrigation areas follow the same administrative pattern as the MIA.

Irrigation districts are set up under the Water Act, 1912 (as amended) for (*a*) domestic and stock water supply and (*b*) irrigation. The essential difference between an 'Area' and a 'District' is that, in the case of the former, all the land to be included in the Area is acquired by the Crown and then sub-divided into separate holdings. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works. Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilise the New South Wales share of the Storage. The schemes are based on 'extensive' irrigation, that is, water rights are allotted to holdings on the basis that only a portion of each holding will be irrigated, but additional water, when available, may be obtained by landholders. 'Water right' is the annual quantity that will cover 1 hectare to a depth of 100 mm.

The Water Act, 1912 (as amended) provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, NEW SOUTH WALES 1980–81

(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	22,136	8,743	n.a.	677	31,556
Other pastures (sown or native)	43,944	224,109	n.a.	10,928	278,981
Wheat	11,464	125,024	n.a.	3,265	139,753
Other cereals for all purposes	14,471	138,940	n.a.	3,005	156,416
Vegetables for human consumption	8,495	2,191	72	270	11,028
Citrus fruit	4,290	3,658	249	396	8,593
Other fruit	2,299	1,260	1,982	563	6,104
Grapevines	1,342	6,414	1,244	45	9,045
All other crops	5,588	66,246	72	1,222	73,128
Total	**114,029**	**576,585**	**3,619**	**20,371**	**714,604**

SOURCES OF IRRIGATION WATER, NEW SOUTH WALES 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	414,298	58
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	228,508	32
from farm dams	20,033	3
Total surface water	*662,839*	*93*
Underground water supply (e.g. bore, spear, well) (*b*)	48,882	7
Town or country reticulated water supply	2,883	—
Total all water sources	**714,604**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.

Future program

The program of development in hand includes the provision of additional dams, weirs, flood mitigation and drainage schemes and river management works.

Construction work continued on Windamere Dam on the Cudgegong River.

The construction of surface and sub-surface drainage schemes continued in the Murray Valley to alleviate rising groundwater and salinity problems.

Preliminary work has commenced on the enlargement of Glenbawn Dam on the Hunter River.

Investigations are continually being carried out to assess demand and identify worthwhile water conservation projects which could be implemented as funds become available.

A comprehensive State Water Plan is being prepared. The Plan is intended to provide a broad framework for the efficient management and orderly development of the State's water and related land resources.

For more detailed information on Water Resources in New South Wales see the chapter entitled *Physical Development* in the latest edition of the New South Wales Official Year Book.

Victoria

Administration

Victorian Governments have been active in the development of country water supplies since the 1860's when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act 1881*. Development under the trust system was greatly stimulated by the *Irrigation Act 1886*, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act 1905* established the State Rivers and Water Supply Commission to take over the Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface waters outside the metropolis. The Commission now supervises all private diversions from streams and directly administers irrigation districts, rural waterworks and urban districts, flood protection districts and urban water supplies. It also supervises the activities of local urban water supply authorities, and local sewerage, river improvement and drainage authorities.

Works summarised

The State Rivers and Water Supply Commission's storages are augmented by Victoria's half share in River Murray Commission storages. Most of the water is for irrigation. However, about one quarter of irrigation production is from lands irrigated by 'private diverters', i.e., irrigators who are authorised to take water from streams, lakes, etc., but who do not come within the boundaries of an irrigation district.

Rural water supply systems

The principal irrigation systems in Victoria are:

- *Goulburn–Campaspe–Loddon.* The main storage is Lake Eildon with a capacity of 3,392 million cubic metres. The main products in these systems are dairy products, fruit, wool and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two-thirds of Australia's total.
- *Murray River System.* The Murray Valley Irrigation Area and the Torrumbarry Irrigation System are irrigated by water diverted at the Yarrawonga and Torrumbarry Weirs respectively. These areas are devoted mainly to dairying, fat lambs and canning fruit (Murray Valley) and dairying, fat lambs, vineyards, orchards and market gardens (Swan Hill). Downstream from Swan Hill, the First Mildura Irrigation Trust and four Commission Districts are supplied by pumping and produce mainly dried vine fruit, citrus fruits, and table and wine grapes.
- *Southern Systems.* The Maffra–Sale–Central Gippsland district, supplied from the Macalister River and regulated by Lake Glenmaggie, is devoted mainly to dairying.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, VICTORIA 1980–81

(Hectares)

Crops and Pastures	*Method* *Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	3,305	4,737	n.a.	147	8,189
Other pastures (sown or native)	36,423	406,369	n.a.	7,910	450,702
Cereals for all purposes	2,573	29,893	n.a.	299	32,765
Tobacco	2,026	22	n.a.	87	2,135
Vegetables for human consumption	15,649	2,903	30	1,350	19,932
Fruit	5,730	5,035	2,020	699	13,484
Grapevines	3,290	11,555	380	143	15,368
All other crops	1,614	2,318	31	35	3,998
Total	**70,610**	**462,832**	**2,461**	**10,670**	**546,573**

SOURCES OF IRRIGATION WATER, VICTORIA 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	439,656	80
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	55,848	10
from farm dams	25,223	5
Total surface water	*520,727*	*95*
Underground water supply (e.g. bore, spear, well) (*b*)	14,814	3
Town or country reticulated water supply	11,032	2
Total all water sources	**546,573**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

- *Werribee and Bacchus Marsh.* These districts produce fresh fruit, vegetables and dairy products mainly for the local domestic market. Irrigation is supplied from the Werribee River system which is regulated by three main storages, viz. Pykes Creek, Melton Reservoir and Lake Merrimu.
- *Wimmera–Mallee Domestic and Stock Supply System.* Storages in the Grampian Ranges ensure farm water supplies over the riverless pastoral and cereal lands to the Murray. Without this supply, occupation of the region would be extremely hazardous. There are small areas of irrigation supplied from this system near Horsham and Murtoa.

Future Programs

The Victorian Water Commission's program of capital works continues to emphasise an increasing proportion of expenditure on urban water services, including waste water treatment and disposal, water quality and works to protect the water environment from the adverse effects of land and water use.

The program also reflects national policy in budgetary constraints on works programs in the public sector, and an increasing requirement for justifiable economic viability.

Major provisions in the program include—

- the continuation of a construction program of major water conservation dams for urban, industrial and irrigation supply;
- construction of further within-system storage in the Bendigo area and development of proposals to augment supply to Geelong;
- the construction of large trunk pipelines to augment supply to and to enhance the operating capabilities of the Mornington Peninsula water supply system;
- further development of country water supply and sewerage facilities;
- continuation of works to divert salt from drainage flows in the Kerang Region to evaporative areas;
- the continuation of surface drainage programs in the Northern Irrigation Districts.

For more detailed information on Water Resources in Victoria see the chapter entitled *Water Resources and Sewerage* in the latest edition of the Victoria Year Book.

Queensland

Administration

The important primary industries of Queensland are subject to relatively frequent and serious losses by either drought or extensive flooding.

The right to the use and flow and to the control of water in watercourses, lakes, springs and artesian wells is vested in the Crown, and the Commissioner of Water Resources is authorised to take measures to conserve water and provide for its more equal distribution and beneficial use. Under the *Water Resources Administration Act 1978–1981*, he is required to (*a*) prepare a complete description of the natural water resources of the State, both surface and underground, (*b*) make and keep a record of all the natural water resources of the State, both surface and underground, (*c*) evaluate the present and future water requirements in the State, (*d*) plan the development of the water of the State, (*e*) take such steps as he thinks fit to protect the water resources of the State from anything detrimental to their quality or that results in or is likely to result in a diminution in their quantity, (*f*) investigate and survey any natural water resource, surface or underground, (*g*) co-ordinate the investigation, evaluation and development of plans for control of flood waters and mitigation of flood damage, (*h*) construct works for the conservation, replenishment, utilisation or distribution of the waters of the State, (*i*) manage water conservation, water supply and irrigation undertakings established under any Act of the State. As required under the *Water Act 1926–1983*, and the *Irrigation Act 1922–1983*, rights to underground and surface water are allocated and their use is controlled by a system of licensing of all artesian bores and sub-artesian bores in areas proclaimed by the Governor in Council and all conservation and use (other than for stock and domestic supplies) of flow in watercourses.

The Commissioner is required to prepare a co-ordinated program of work for the conservation, utilisation and distribution of water resources, and to make recommendations to the Government regarding the carrying out of works in this program. He is principally responsible for water conservation and supply works for rural purposes, including irrigation, stock and domestic supply. In planning such storages, economies to all users are accrued by providing, where possible, for dual or multi-purpose use of works for irrigation, rural, urban and industrial uses including power generation and mining purposes.

Summary of schemes

Unlike other States, the greater part of the area irrigated in Queensland is by individual private pumping plants taking supply from streams or underground sources, spread widely through the State, rather than in constituted irrigation areas where supply is provided by channel systems delivering water to farms. Because of the predominance of irrigation by private diversion pumping, most of the storages are used to release water downstream to maintain supplies for such purposes.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, QUEENSLAND 1980–81
(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	13,550	111	n.a.	359	14,020
Other pastures (sown or native)	15,437	3,303	n.a.	944	19,684
Grain Sorghum	7,393	10,003	n.a.	689	18,085
Other cereals for all purposes	14,939	14,791	n.a.	1,640	31,370
Sugar cane	49,819	42,000	354	9,542	101,715
Cotton	1,104	18,984	n.a.	640	20,728
Tobacco	3,181	54	4	54	3,293
Vegetables for human consumption	15,357	2,605	554	940	19,456
Fruit	4,990	223	1,817	652	7,682
Grapevines	237	12	83	13	345
All other crops	9,836	8,453	13	1,027	19,329
Total	**135,843**	**100,539**	**2,825**	**16,500**	**255,707**

SOURCES OF IRRIGATION WATER, QUEENSLAND 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	52,923	21
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	51,082	20
from farm dams	21,934	9
Total surface water	*125,939*	*49*
Underground water supply (e.g. bore, spear, well) (*b*)	129,398	51
Town or country reticulated water supply	370	. .
Total all water sources	**255,707**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Irrigation areas

About 25 per cent of the area under irrigation annually, ie some 75,230 hectares, is concentrated in seven Irrigation Areas constituted under the *Irrigation Act* 1922–1983, where the supply is generally reticulated by channel systems (by means of gravity or by pumping) from the storage. In addition, some supply is also provided from streams regulated by the storage. Further details are shown on page 883 of Year Book No. 61.

Irrigation areas	*Comments*
Dawson Valley	Around Theodore on Dawson River; cotton, graincrops and urban usage in Theodore and Moura.
Burdekin River	Complex system of conservation, irrigation, industrial and other uses; sugar cane, rice, seed and small crops; artificial recharging of underground water supplies from unregulated flows (Burdekin River)
Mareeba-Dimbulah	Hinterland of Cairns; tobacco, rice, peanuts and urban/hydro-electric uses; Tinaroo Falls Dam.
St George	Balonne River; cotton, soya beans and cereals, and urban uses; Beardmore Dam.
Emerald	Joint Federal-State undertaking based on State's largest storage—Fairbairn Dam; industrial and urban use, irrigation of cotton, soya beans and cereals.
Bundaberg	Joint Federal-State undertaking; sugar and small crops and urban supplies for Bundaberg and adjacent shires; Fred Haigh Dam.
Eton	Hinterland of Mackay; sugar cane; Kinchant Dam.

A number of other schemes have been established under the *Water Act* 1926-1983, where water from storage is released downstream to maintain adequate supplies for pumping under licence to adjacent lands. Details on these and others currently under construction are in Year Book No. 61, pages 883–4.

Rural, stock and domestic supplies

Improvements to stock and domestic water supplies are assisted by Rural Water Supply Schemes and Bore Water Supply Areas (constituted under the Water Act). Investigation, design and administration of these schemes are carried out by the Queensland Water Resources Commission.

Underground water supplies

The availability of underground water, particularly the Great Artesian Basin, has played a major part in the development of the pastoral industry in Queensland. Underground water is also used extensively for irrigation on individual farms, particularly along the coastal fringe, and for domestic purposes. Over half the area irrigated in Queensland receives its supplies from underground sources. In accordance with the requirements of the *Water Resources Administration Act* 1978 1981 the investigation of availability of underground water is being pursued by geological mapping, investigation drilling and hydro-geological assessment. The most important areas where water from this source is used for irrigation are the Burdekin Delta, Condamine Valley, Bundaberg, Lockyer Valley, Callide Valley and Pioneer Valley. The table on page 327 of this chapter provides the quantity and purpose of groundwater usage in these areas.

For more detailed information on Water Resources in Queensland see the chapter entitled *Land Settlement* in the latest edition of the Queensland Year Book.

South Australia

Administration

All major water resources and most public water supply schemes in South Australia are administered by the Engineering and Water Supply Department under the various statutes mentioned below.

- The Waterworks Act, 1932–1981, which empowers the Minister of Water Resources to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes to serve proclaimed water districts throughout the State.
- The Water Conservation Act, 1936–1975, provides for the control of small reservoirs, bores, tanks, etc. established in remote areas as emergency water supplies or to assist local development.
- The River Murray Waters Act, 1935–1983, which ratifies the River Murray Waters Agreement, and under which the Engineering and Water Supply Department operates and maintains Lake Victoria storage, nine weirs and locks downstream of Wentworth, N.S.W., and barrages at the river mouth.

- The Water Resources Act, 1976–1981, which came into force from 1 July, 1976 and superseded the Control of Waters Act, 1919 and the Underground Waters Preservation Act, 1969, represents the culmination of the development of the Government's water resources policy involving the management of all aspects of water—surface and underground, quality and quantity. The Act provides for the control of diversions of surface waters from Proclaimed Watercourses and for the withdrawal of underground waters from Proclaimed Regions. Currently, the River Murray, Little Para River and Bolivar Effluent Channel are Proclaimed Watercourses, the Proclaimed Regions being the Northern Adelaide Plains, Padthaway and Angas-Bremer Irrigation Areas. The legislation provides for control over the construction or modification of most categories of wells over the whole State and for the abatement of pollution of all waters. It establishes a South Australian Water Resources Council and Regional Advisory Committees as vehicles for public participation in the water resources management process. Currently, Regional Committees operate in respect of the River Murray; the Northern Adelaide Plains, Little Para River and Bolivar Effluent Channel; Padthaway; the North Para River; the Arid Areas and the Angas-Bremer Irrigation Area. In addition, the Act provides for a Water Resources Appeal Tribunal to give individuals the opportunity to appeal against decisions of the Minister pursuant to the Act.

Summary of schemes

South Australian irrigation commenced with an agreement involving the Chaffey brothers in 1887 whereby an area was made available for the establishment of certain irrigation works at Renmark. From this start, government, co-operative and private irrigation areas totalling more than 42,000 hectares have been developed in the South Australian section of the Murray Valley. The authority controlling River Murray irrigation is the Engineering and Water Supply Department which operates under policies determined by the Minister of Water Resources on advice of the S.A. Water Resources Council. The principal high land crops comprise citrus and stone fruits, and vines. The reclaimed

CROP AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, SOUTH AUSTRALIA 1980–81

(Hectares)

Crops and Pastures	*Method*				*Total*
	Sprays	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	
Pure Lucerne	9,160	2,970	n.a.	—	12,130
Other Lucerne-based pastures	2,499	521	n.a.	122	3,142
Other pastures (sown or native)	8,631	12,401	n.a.	281	21,313
Cereals for all purposes	1,379	924	n.a.	2	2,305
Vegetables for human consumption	5,167	303	26	180	5,676
Fruit	9,409	1,564	936	718	12,627
Grapevines	6,782	8,783	3,501	1,187	20,253
All other crops	1,329	601	17	81	2,028
Total	**44,356**	**28,067**	**4,480**	**2,571**	**79,474**

SOURCES OF IRRIGATION WATER, SOUTH AUSTRALIA 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	19,121	24
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	18,454	23
from farm dams	3,331	4
Total surface water	*40,906*	*51*
Underground water supply (e.g., bore, spear, well) (*b*)	38,088	48
Town or country reticulated water supply	480	1
Total all water sources	**79,474**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

swamps along the lower section of the Murray are used almost exclusively for pasture and fodder crops. Vegetable crops of various kinds are important in both types of irrigated lands.

Except for quantities held in various lock pools and natural lakes, no water from the Murray is stored within South Australia for irrigation purposes. Usage of the River is therefore planned on the basis of the minimum monthly flows to which South Australia is entitled under the River Murray Waters Agreement. This factor, plus the need to reserve water for city, town and rural water supply systems, has resulted in the expansion of irrigation from the River being rigidly controlled by the Government. In addition to irrigation from the River Murray there are considerable areas irrigated from underground sources by individual landholders in South Australia. The most important of these areas are the North Adelaide Plains (market gardens) and the Padthaway district of the south-eastern region (pastures, fodder, seed crops and vines).

Adelaide Metropolitan Water Supply

In 1982–83, a year of severe drought River Murray pipelines supplied 85 per cent of the total intake to the Metropolitan Adelaide Water Supply System. This is the highest percentage ever recorded. The principal sources of supply for the nine storages in the Mt Lofty Ranges are the Rivers Onkaparinga, Torrens, South Para, Myponga and Little Para. For details on Adelaide Metropolitan Water Supply, see "Metropolitan Adelaide Water Resources Study", Engineering and Water Supply Department, June 1978.

Country reticulation supplies

A number of reservoirs in the Barossa Ranges and other local sources are augmented by the Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines which provide River Murray water to extensive country areas. A network of branch mains provides the means of conveying water to numerous towns and large areas of farmlands.

Surface and underground resources have been developed to supply most country centres not covered by the larger schemes. Victor Harbor and adjoining south coast resort centres are supplied from reservoirs and the River Murray. A reservoir on Kangaroo Island supplies Kingscote and adjacent farmlands. Underground resources of the lower south-east supply all towns in the region, the city of Mount Gambier and nearby farmlands being reticulated from the well-known Blue Lake. At the far northern opal mining town of Coober Pedy a reverse osmosis desalination plant provides a potable supply from brackish groundwater. Other centres in the far north obtain supplies from the Great Artesian Basin. For details on underground water resources in South Australia see "Underground Water Resources of South Australia", Bulletin No. 48, Department of Mines and Energy, Geological Survey of South Australia, 1978.

South-eastern drainage

A section of the South-East Coast Drainage Division extends into South Australia but has no co-ordinated drainage pattern to form a significant surface water resource. However, high rainfall in the area has led to the natural development of underground resources. Surplus water is not easily disposed of in the valleys and low range terrain, so drainage systems have been undertaken by the Government in co-operation with landholders. For further details see "Environmental Impact Study on the effects of Drainage in the South East of South Australia", South Eastern Drainage Board, June 1980.

Murray River Irrigation Areas

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause the death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. At present, disposal of drainage water is achieved by pumping to basins on river flats where it evaporates or is discharged into the river when it is in flood. It may also be discharged into underlying sand and limestone aquifers. The usefulness of these aquifers is declining as they are becoming fully charged with water.

As a result of investigations made into alternative disposal schemes, a $25 million package of six salinity control measures was embarked upon in 1979. The measures combine engineering works, improved irrigation practices, and river regulation to reduce salinity to acceptable levels. The centrepiece of the programme is the Noora Drainage Disposal Scheme, progressive commissioning of which commenced in September 1982, with pumping from the Berri Basin.

When completed, the Scheme will allow drainage water presently held in river flat basins to be pumped to a large evaporation basin located well out of the river valley, approximately 20 km east of Loxton.

For more detailed information on Water Resources in South Australia see the chapter entitled *Physical Development* in the latest edition of the South Australian Year Book.

Western Australia

Administration

The Minister for Water Resources administers the departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914–1978*. He is advised by an Irrigation Commission representing the local irrigationists and government, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947–1979*, the water supplies to certain country towns and reticulated farmland. As Minister for Works he controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904–1979*, which provides a large degree of autonomy with ultimate Ministerial control.

Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River and Preston Valley Irrigation Districts between Waroona and Donnybrook, the water being channelled from dams in the adjacent Darling Range. The success of dairying and stock raising and, to a lesser extent, vegetable growing, which have replaced citrus growing, has led to a gradual but substantial extension of irrigation areas in the south-west.

Irrigation areas at Carnarvon and on the Ord and Fitzroy Rivers in the Timor Sea Drainage Division are established in the north of the State.

Since the mid 1930s, a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Initially, the principal source of irrigation water for plantations was private pumping from the sands of the Gascoyne River. Overpumping by the growers however, resulted in salt intrusion into the fresh water aquifer. Government controls were introduced and a major ground-

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, WESTERN AUSTRALIA 1980–81

(Hectares)

Crops and Pastures	*Method* *Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	755	63	n.a.	—	818
Other pastures (sown or native)	1,292	10,738	n.a.	339	12,369
Cereals for all purposes	147	589	n.a.	216	952
Vegetables for human consumption	2,219	321	39	299	2,878
Fruit	1,900	292	1,540	312	4,044
Grapevines	248	49	79	228	604
All other crops	468	2,436	58	74	3,036
Total	**7,029**	**14,488**	**1,716**	**1,468**	**24,701**

SOURCES OF IRRIGATION WATER, WESTERN AUSTRALIA 1980–81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	13,547	55
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	2,132	7
from farm dams	4,672	19
Total surface water	*20,351*	*82*
Underground water supply (e.g., bore, spear, well) (*b*)	4,104	17
Town or country reticulated water supply	246	1
Total all water sources	**24,701**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

water supply scheme upstream of the irrigation area has since been commissioned and provides 171 properties with approximately two-thirds of the irrigation water. The area specialises in growing bananas together with out of season vegetables for the Perth market. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

The Ord River Irrigation Project in the Kimberley Division provides for the eventual development of an irrigation area of some 70,000 hectares of land, one third of which is in the Northern Territory. The first stage, in which water was supplied from the Kununurra Diversion Dam (capacity 98.7 mil. cubic metres) to 30 farms averaging 270 hectares plus a 970 hectare pilot farm was completed in 1965. Cotton was the principal crop, with grain sorghum and fodders for cattle fattening also important. Completion in 1971 of the Ord River Dam, which stores 5,720 mil. cubic metres in Lake Argyle, has allowed expansion of the area to be irrigated into the second stage. Five farms averaging 388 hectares were allocated in 1973. Since then, cotton has been phased out due to high off-farm costs and increasing costs of insect control specific to the cotton industry. Maize, peanuts and rice are the main crops being grown at present with smaller areas of grain sorghum, soya beans, mung beans, pasture, cucurbits and bananas. A pilot sugar farm has produced high yields and has resulted in proposals for a sugar industry to be established. The proposals are being considered by the State Government.

The Camballin Irrigation District on the Fitzroy River flood plain in the West Kimberleys is dependent on diverted river flows and a small volume of storage behind the diversion structures on the Fitzroy River and Uralla Creek. Grain and fodder sorghums are the main crops. Although a large area was developed for irrigation, the expansion of activity that was expected by the Australian Land and Cattle Company was cut short in February 1982 when this company was placed in the hands of a receiver-manager and in May 1982 the receiver placed the project under 'care and maintenance'. A small area is being cropped.

Country water supplies controlled by Department of Public Works

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in the cereal and sheep districts of the State. Two years after the completion of the 1.7 million hectare scheme in 1961, an extension of 1.5 million hectares was agreed to with Federal-State funding.

Goldfields and Agricultural Water Supply

Water for the Eastern Goldfields is supplied by pipeline from Mundaring Reservoir in the Darling Range. The scheme now serves over 93 towns and 2.7 million hectares of farmland.

West Pilbara Water Supply

The West Pilbara Water Supply serves consumers in the towns of Dampier, Karratha, Wickham and Point Samson and industrial complexes at Dampier, Cape Lambert and the Burrup Peninsula. Water is supplied from the Millstream groundwater source. Future augmentation will be from the Harding Dam which is at present under construction.

Geraldton Regional Water Supply. The Geraldton Regional Water Supply is supplied principally from the Allanooka groundwater source and a small amount from Wicherina (groundwater plus catchment). Towns supplied are: Geraldton, Denison, Mullewa, Dongara, Walkway, Narngulu and Eradu.

Great Southern Towns Water Supply

This scheme provides water to towns and localities from Wellington Dam to Narrogin and along the Great Southern Railway from Brookton to Tambellup, supplying 31 towns and 0.6 million hectares of farmland.

Port Hedland Water Supply. The Port Hedland Water Supply supplies Port Hedland, South Hedland and Wedgefield from the Yule River and De Grey groundwater sources.

The Mandurah Regional Water Supply. This scheme obtains supplies from the South Dandalup Dam and the Ravenswood groundwater source. Towns supplied are Mandurah, Yunderup, Furnissdale, Coodanup, Riverside Gardens and Ravenswood. Extension of the scheme to localities north and south of Mandurah is in progress.

MAJOR WATER SUPPLY SCHEMES
COMPARATIVE PUMPING STATISTICS FOR PAST YEARS
(millions of cubic metres)

	1978-79	*1979-80*	*1980-81*	*1981-82*	*1982-83*
Goldfields and Agricultural Areas Water Supply	(*a*)18.57	23.61	25.43	24.70	26.28
West Pilbara Water Supply	8.90	9.39	9.81	10.50	11.46
Geraldton Regional Water Supply	6.54	6.97	7.43	7.20	7.31
Great Southern Towns Water Supply	5.64	6.49	6.19	5.88	6.72
Port Hedland Water Supply	5.66	6.00	5.97	5.78	6.07
Mandurah Regional Water Supply	1.48	1.83	1.94	2.11	2.75

(*a*) Restrictions.

Local and Other Regional Water Supplies. As well as the major water supply schemes above, water is also supplied by the Government from 8 other Regional Water Supply Schemes to 21 towns and from 99 local water supply schemes to 101 towns. The water comes from a variety of sources including underground, artificial catchments and stream flows.

Underground water

Considerable use is made of groundwater by individual farmers, pastoralists, market gardeners and others, although the water quality varies from place to place and much of it is too saline for irrigation or even stock purposes. Artesian wells throughout the State and non-artesian wells within 'declared' areas must be licensed under the *Rights in Water and Irrigation Act, 1914–1978*. Industries also use groundwater in substantial quantities, especially in the processing of titanium, iron and alumina, and this demand has intensified the search for groundwater.

For more detailed information on Water Resources in Western Australia see the chapter entitled *Land Tenure and Settlement, Water Supply and Sewerage* in the latest edition of the Western Australian Year Book.

Tasmania

Main purposes of water conservation and utilisation

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large-scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately-sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, beans and peas. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands, nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east, unconsolidated Tertiary clays and gravels yield water of variable quality. In some coastal areas, notably King and Flinders Islands, water is obtained from aeolian sands.

The Mines Department is charged with the investigation of underground water resources. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to the eastern half of the watersheds is not regarded as practicable. The Hydro-Electric Commission, however, has planned for the future development of four storage dams in the West Coast region on the Pieman, Murchison and Mackintosh Rivers.

Administration

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but three statutory authorities, the Metropolitan Water Board, the Rivers and Water Supply Commission and the North West Regional Water Authority, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart, Launceston and N.W. Coast regions, and directly to certain industrial consumers. The Board is responsible for bulk supplies to the Hobart, Clarence, Glenorchy to Kingborough, Brighton, Green Ponds, New Norfolk, Richmond and Sorrell local government areas, while the Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. The Authority controls the supply of water to the municipalities of Circular Head, Wynyard, Penguin, Ulverstone, Devonport, Latrobe and Kentish.

Rivers and Water Supply Commission. The Commission is empowered by the *Water Act* 1957 to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as for irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Metropolitan Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme, which was originally constructed to supply water to a sodium alginate industry at Louisville near Orford and to supplement the water supply of the township of Orford. The sodium alginate industry ceased production in December 1973. The North Esk Regional Water Supply was constructed to meet industrial requirements of the alumina refinery and other industries at Bell Bay, and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar and has since been augmented by the construction of a dam on the Curries River to supply the northern end of the Tamar Valley. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Metropolitan Water Board, the Rivers and Water Supply Commission or the North West Regional Water Supply Authority, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Commission may make recommendations to the Minister for payment of a subsidy.

Irrigation

The Cressy-Longford Irrigation Scheme officially opened in 1974 and was the first major State irrigation project to be established in Tasmania. The source of supply is the Tailrace of the Poatina Hydro-Electric Power Station from which up to 160 thousand cubic metres per day may be available to farmers inside the Irrigation District and along the Liffey River downstream from Pitts Lane.

There are some 10,000 hectares fit for irrigation within the Irrigation District, half of which may be watered by gravity. The Scheme serves some seventy-two farms within the Irrigation District and another thirty may be supplied on the Liffey River and on the fringes of the Irrigation District.

CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, TASMANIA 1980-81

(Hectares)

	Method				
Crops and Pastures	*Sprays*	*Furrows and/or Flood*	*Trickle*	*Other and multiple methods*	*Total*
Pure Lucerne	773	29	n.a.	33	835
Other pastures (sown or native)	7,080	6,741	n.a.	320	14,141
Cereals for all purposes	1,231	43	n.a.	29	1,303
Vegetables for human consumption	10,351	57	n.p.	893	(*a*) 11,301
Fruit	1,620	102	553	200	2,475
All other crops	2,346	235	n.p.	98	(*a*) 2,679
Total	**23,401**	**7,207**	**567**	**1,573**	**32,748**

(*a*) Incomplete.

SOURCES OF IRRIGATION WATER, TASMANIA 1980-81

Source of supply	*Area irrigated*	*Percentage of total area irrigated*
	(hectares)	%
Surface water		
from State irrigation schemes	1,798	6
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (*a*)	14,213	43
from farm dams	15,623	48
Total surface water	*31,634*	*97*
Underground water supply (e.g., bore, spear, well) (*b*)	755	2
Town or country reticulated water supply	359	1
Total all water sources	**32,748**	**100**

(*a*) Includes regulated and unregulated streams. (*b*) Naturally or artificially replenished.

Besides the Cressy-Longford Irrigation Scheme which is operated by the Rivers and Water Supply Commission, the following local bodies supply water for irrigation or inter-alia exercise control over its availability: the Lawrenny Water Trust on the Ouse River, the Clyde Water Trust on the Clyde River, the Macquarie Water Trust on the Macquarie River at Ross and the Campbell Town Council on the Elizabeth River.

The major portion of the 32,748 hectares irrigated in the State in 1980-81 were watered by private schemes either by pumping directly from unregulated streams or from on farm storages. Pasture still predominates as the main crop watered but potatoes and other vegetables amount to 34 per cent of the total area irrigated.

For more detailed information on Water Resources in Tasmania see the chapter entitled *Local Government* in the latest edition of the Tasmanian Year Book.

Northern Territory

Information on climatic conditions can be found in the chapter Climate and Physical Geography of Australia. A brief outline of contour and physical characteristics is in Chapter 27, The Territories of Australia.

Administration

Under the Northern Territory *Control of Waters Ordinance* 1938, control of natural waters is vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases). The diversion of water is prohibited except under prescribed conditions. The Act requires that drilling for groundwater be carried out only by drillers who are registered under the Act. Registered drillers are required to provide the Government with information on bores drilled, including the location, depth and size of bore, strata encountered and water produced. In particular areas, described as Water Control Districts, where stricter control is necessary, the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Act* 1960, any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Act. He may also apply for an advance towards the cost of work proposed to be carried out. The Act also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder has applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

Northern Territory water legislation is currently under review. It is proposed that the above mentioned Acts will be amalgamated into a new 'Water Act' in 1984.

The Water Division of the Department of Transport and Works carries out systematic stream gauging, the collection of data relating to the quantity and quality of surface and groundwater, the planning of water use for town water supplies, management of water resources throughout the Territory and flood prevention and control. It also provides a general advisory service to the public on water resources and water conservation by providing information on the prospects of obtaining groundwater, the possible location of bore sites, the method of drilling and equipping bores, stream flows, surveys of dam sites, the design of water supply schemes and reticulation lay-outs, and the chemical and bacteriological quality of water supplies. It is involved in water pollution studies and control,and carries out environmental assessments of water and related developments. The Division administers both of the acts described.

Underground water

For information on underground water resources in the Northern Territory *see* Year Book No. 55 and earlier issues, and the Australian Water Resources Council's publication, *Groundwater Resources of Australia,* 1972 and *Review of Australia's Water Resources,* 1975.

Of approximately 16,000 bores and wells registered in the Territory up to 30 June 1979, 50 per cent were for pastoral use, 15 per cent were investigation bores, 15 per cent served town and domestic supplies, 5 per cent were for crop use, 5 per cent were used on mining fields, and the remainder for various other uses.

Community water supplies

The largest water conservation projects in the Territory are the Darwin River Dam (259.0 million cubic metres) and the Manton Dam (15.7 million cubic metres) which both serve Darwin with a reticulated water supply. Groundwater from McMinns Lagoon area can be used to augment supply.

Most other towns and communities, including Alice Springs, Tennant Creek, Katherine, Jabiru and Nhulunbuy, are supplied from groundwater.

Investigations are continuing into groundwater supplies for aboriginal communities and irrigation supplies in the Alice Springs District and the Daly River basin.

Surface water measurement

The hydrological investigations required in the Northern Territory as part of the National Water Resources Assessment Program are being carried out by the Water Division. The program for the Northern Territory includes establishment of base streamgauging stations and pluviographs (automatic rainfall recorders). In particular areas of development where water supply or irrigation proposals require special or extra surface water data, supplementary gauging stations are built to obtain this information. Intensive studies are being undertaken in the Alligator Rivers Region and other mining areas for the collection of both quantitative and qualitative data for environmental and management purposes. The streamgauging network of the Division comprises gauging stations (base gauging and supplementary) and pluviographs. Several other organisations also operate gauging stations and pluviographs in the Northern Territory.

Irrigation in the Territory is not extensive, being confined to isolated locations near Darwin, Adelaide River, Daly River, Katherine, Ti Tree and Alice Springs for the purpose of growing fruit, vegetables, fodder crops, pastures and some dairying. Some of this irrigation is carried out using bore water.

There is increasing demand for water resources assessment studies and assistance for relatively small irrigation projects.

Australian Capital Territory

Surface water

Surface water storages supplying Canberra (population about 251,000) and the city of Queanbeyan (population about 22,000) are located to the south-west and south-east. The storages to the south-west are in the heavily timbered, mountainous Cotter River catchment within the A.C.T., the storages being Corin Dam (75.5 million cubic metres), Bendora Dam (10.7 million cubic metres) and Cotter Dam (4.7 million cubic metres). The storage to the south-east is in New South Wales in the Queanbeyan River catchment (over which the Commonwealth has permanent water rights) on the western slopes of the Great Dividing Range is the Googong Dam (125 million cubic metres).

The existing storages on the Cotter and Queanbeyan River have an ultimate combined capacity to serve 450,000 persons. The remaining water resource within the A.C.T. is the Gudgenby River which is at present not utilised but has the potential to serve approximately 200,000 persons.

The A.C.T. water supply system is operated and maintained by the Department of Housing and Construction. This Department operates a network of stream gauging stations in the A.C.T. to monitor surface water resources. A number of the gauging stations are provided with telemeters which enable the Department to provide a flood warning system in association with the Bureau of Meteorology.

Groundwater

Groundwater in the A.C.T. and environs occurs mainly in fractures in crystalline rock such as granite and volcanic rocks; in folded and fractured slate; and rarely, in solution cavities in limestone. Alluvial aquifers of significance are restricted to the Lake George basin and small areas along mature sections of the Molonglo and Murrumbidgee Rivers. Groundwater has been used in the past by most primary producers to augment surface storage. Groundwater production bores in the A.C.T. have yields ranging between about 0.4 and 20 cubic metres per hour; 3 cubic metres per hour is about the average yield. However, many farm bores have fallen into disuse as a result of the Government's resumption of freehold land within the A.C.T., and because of the rapid expansion of urban growth. The Bureau of Mineral Resources has provided a bore-siting, groundwater-quality and yield-prediction service in and around the A.C.T. since the early 1950's and until 1978 maintained a network of 48 observation bores which had been monitored regularly for up to 25 years. Periodic monitoring of the bores recommenced in 1980 as a consequence of greatly increased demand for the Bureau's rural bore siting services during the current drought. Data are now being collected on groundwater occurrences within the A.C.T. and environs for preparation by the Bureau of a 1:100,000 scale hydrogeologic map.

Control of irrigation and farm water supplies is exercised by the Department of Territories and Local Government. The Bureau of Mineral Resources of the Department of Resources and Energy provides technical advice to landholders and drilling contractors on groundwater and, occasionally, on runoff.

CHAPTER 16

MINERAL INDUSTRY

GENERAL

Geology and mineral resources

General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a discontinuous belt several hundred kilometres wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

Economic geology

Minerals of economic significance occur throughout Australia, their geological age ranging from Precambrian to Recent. Many of the large deposits such as those at Broken Hill (N.S.W.), Mount Isa (Qld), the Kalgoorlie and Pilbara regions of W.A. and the Alligator Rivers area of N.T. are Precambrian in age. In eastern Australia the major deposits such as the Elura, Cobar, Woodlawn and Rosebery base-metal deposits and most of the black coal deposits, are Palaeozoic in age. The black coals of the Moreton district of Queensland, northeast New South Wales and Leigh Creek, S.A. are of Mesozoic age. Deposits formed in Tertiary times include the brown coal in Victoria, the bauxites of Weipa (Qld), Gove (N.T.) and the Darling Range (W.A.) and the nickeliferous laterites at Greenvale (Qld).

Mineral resources

Australia is self-sufficient in most minerals of economic importance (and much more than self-sufficient in some). Known adequate reserves of major minerals with production sufficient for domestic demand and exports include aluminium (bauxite and alumina), black coal, copper, gold, iron ore, lead, natural gas, nickel, salt, silver, tin, tungsten, uranium and zinc. Reserves sufficient for domestic demand include clays (except light grade china clay), brown coal and dolomite.

For further details of principal Australian mineral deposits, and notes on principal mineral resources, *see* Year Book No. 61, pages 925–932 and the Australian Mineral Industry Quarterly and Annual Reviews.

Administration

All mineral rights in Australia are vested in the Crown except those on land which was granted before the Crown began to reserve mineral rights. In practice, these private mineral rights are important only in the New South Wales coalfields. In the States, these rights are held by the State Governments. On 1 July 1980, executive authority with respect to mining and minerals except in relation to certain prescribed substances within the meaning of the Atomic Energy Act (principally uranium) was transferred from the Commonwealth Government to the Northern Territory Government. Private mineral rights in the Australian Capital Territory are vested in the Commonwealth Government. The Commonwealth Government is able also to influence over-all development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation, and loan raisings. Certain specially-formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.

Mineral exploration and development

Onshore. Each State or Territory has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. These Acts, etc., are similar in principle but different in detail. They all make provision for a miner's right to prospect and for small mining leases for mineral production. The principles embodied were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments have been enacted to modernise the legislation, it is generally inadequate for the large-scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiations with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory). Mining legislation enacted in recent years is simpler and more suited to modern conditions.

As a result of the introduction of large-scale modern prospecting methods (particularly airborne prospecting), small prospecting areas were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited (usually to one or two years only) and, if renewed for a further period, is only over an area selected from the larger area (usually 50 per cent) as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authority to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

Off-shore. Following the enactment of the *Seas and Submerged Lands Act* 1973 the High Court confirmed that the Commonwealth has sovereignty over the territorial sea and sovereign rights over the resources of the whole of Australia's continental shelf. However, in the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that responsibility for mining within the outer boundary of the 3 mile territorial sea should lie with the States, while the Commonwealth should have responsibility for areas beyond.

The Minerals (Submerged Lands) Act 1981 passed by the Commonwealth Parliament in June 1981 follows the scheme of the offshore petroleum legislation amendments passed in 1980 and provides for Joint Commonwealth/State Authorities to be responsible for major matters under the legislation with the States being responsible for day-to-day administration. The legislation will be proclaimed to come into effect when complementary State legislation in respect of the 3 mile territorial sea, currently in preparation, is enacted. In the meantime administration of offshore mining is carried out under the States' onshore mining legislation on an interim basis.

The mining code under the new legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration, and the production licence, which covers development. The sharing of royalty between the State and the Commonwealth Governments is to be on a 60-40 basis for all offshore mining, including land-based underground mining.

Petroleum exploration and development

On-shore. In Australia, all petroleum is the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum title:

(a) the permit, covering initial geological, geophysical and exploration drilling;
(b) the licence (in Victoria only), which covers detailed surveys and drilling; and
(c) the lease, which covers development operations and production.

Off-shore. In the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that, as in the case of mining for other minerals, responsibility for administering petroleum exploration and production within the outer boundary of the 3 mile territorial sea would be a State responsibility, while the Commonwealth would have responsibility for the continental shelf beyond the 3 mile territorial sea.

Amendments to the *Petroleum (Submerged Lands) Act* 1967 passed by the Commonwealth Parliament in May 1980 and proclaimed on 14 February 1983, provide for a Joint Authority for the adjacent area of each State (beyond the 3 mile Territorial Sea limit) consisting of the Commonwealth Minister and the State Minister. The Joint Authorities are concerned with major matters arising under the legislation, and in the case of disagreement the view of the Commonwealth Minister will prevail. Day-to-day administration will continue to be in the hands of the State Minister as the Designated Authority and State officials.

The mining code applicable under the legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and exploration. The sharing of royalty between the State and the Commonwealth Governments is to continue on a 60-40 basis, and any override royalty payments will continue to be retained by the States. The offshore constitutional settlement and the operation of Commonwealth and State offshore petroleum legislation are being reviewed by the Commonwealth Government. Decisions on the outcome of the review and details of any changes are expected to be known in 1984.

Mineral royalties

The collection by governments of royalties for the production of minerals within their area of authority is an internationally-accepted practice. In Australia, the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments.

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the following table.

MINERAL ROYALTY RECEIPTS: GOVERNMENTS

($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
New South Wales(*a*)	46,354	49,062	35,651	86,797	116,923	87,915
Victoria(*b*)(*c*)	32,696	48,446	60,111	90,554	118,611	108,782
Queensland(*a*)	50,842	53,651	53,679	73,522	73,329	81,430
South Australia	3,346	4,106	4,541	5,869	7,312	8,810
Western Australia	51,638	54,519	57,810	66,712	78,341	81,330
Tasmania	1,496	2,093	2,193	5,261	3,557	2,209
Northern Territory(*d*)	362	277	1,256	2,549	5,666	3,020
Commonwealth Government(*c*)	13,805	23,002	28,031	43,337	54,567	52,321
Total	**200,539**	**235,156**	**243,272**	**374,601**	**458,306**	**425,817**

(*a*) Includes royalties on sand and gravel from Crown lands. (*b*) Includes royalties on brown coal paid by State Electricity Commission. (*c*) Includes royalties received under the *Petroleum* (*Submerged Lands*) (*Royalty*) *Act* 1967–68. (*d*) Excludes the mining royalties paid into Aboriginal Benefits trust fund prior to 1978–79.

Control of Exports

The Commonwealth Government has constitutional power over exports from Australia. Under the Customs (Prohibited Exports) Regulations exports of nuclear sensitive material, hydrocarbons and certain minerals and metals are prohibited unless permission is granted by the Minister for Trade or an authorised person.

The fundamental objectives of the controls are:

(i) to protect the national interest and ensure fair and reasonable market prices are achieved;
(ii) to ensure adequate supplies are available for the domestic market;
(iii) to meet international and strategic obligations; and
(iv) to ensure the Government's nuclear safeguards and physical protection requirements on exports are met, consistent with Australia's international obligations in relation to uranium and nuclear materials.

Export controls are administered on coal, iron ore, bauxite, alumina, petroleum and petroleum products, tin, uranium, monazite and materials of nuclear significance. Controls on tin are applied in respect of Australia's obligations under the International Tin Agreement.

With regard to mineral sands, approvals to export are freely issued except where the Commonwealth considers there are environmental reasons which would make such exports undesirable. Exports of copper scrap and copper alloy scrap are embargoed and quotas apply to secondary copper ingots and basic shapes made from scrap material.

Exporters of common salt in bulk and of ores, concentrates, matte and oxides of nickel, lead, zinc, copper, manganese, tungsten, and blister and refined copper and lead bullion are given automatic approval to export, on application, to cover expected shipments over a 12 month period. All other minerals are not subject to control.

Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth Government and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. In summary, the Board's functions are:

(i) to ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;

(ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;

(iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and

(iv) to promote the welfare of workers engaged in the coal industry in the State.

Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed on the following pages.

Commonwealth Government assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance, mainly through the work of the Bureau of Mineral Resources (BMR) and the Commonwealth Scientific and Industrial Research Organization (CSIRO) as well as through the National Energy Research, Development and Demonstration Program.

Income taxation concessions as at 30 June 1983. Income derived from mining principally for gold in Australia is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

Special deductions for capital expenditure incurred in the exploration for and development of petroleum (including natural gas) are allowable to a petroleum mining enterprise engaged in these operations in Australia. Capital expenditure allowable to petroleum mining enterprises includes, broadly, the costs of exploratory surveys, drilling and well-head plant; plant for the liquefaction of natural gas; and of access roads and expenditure on housing and welfare. The enterprise is entitled to these special deductions against income from any source. While the special deductions for exploration expenditure are deductible immediately against the net income of the enterprise, the deductions for capital expenditure on development are allowable over the life of the oil or gas field or over ten years, whichever is less on a straight line basis.

An enterprise mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes expenditure on exploration and prospecting; preparation of a site for extractive mining operations; buildings; other improvements and plant necessary for those operations; access roads; certain treatment plant; and housing and welfare.

The allowable capital expenditure of a general mining enterprise, other than costs of exploration, may be deducted against income from any source over the life of the mine, or over ten years, whichever is the lesser on a straight line basis. Expenditure incurred by a mining enterprise in exploring for general minerals is allowable as an immediate deduction against net income derived from mining operations. Annual deductions for depreciation on petroleum mining plant or general mining plant may be allowed in lieu of spreading the cost over the life of the oil field or mine. The cost of exploration plant may also be deducted under the depreciation provisions of the law. The investment allowance scheme may permit a deduction at the rate of 18 per cent of the cost of certain new plant.

Special deductions are allowable for capital expenditure incurred on certain transport facilities used primarily and principally in relation to minerals mined in Australia, for the transport of raw minerals and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deduction applies to expenditure incurred on a railway, road, pipeline or similar transport facility and on certain port facilities or other facilities for ships. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten or twenty years at the option of the mining enterprise.

An income tax rebate of 27 cents for each dollar of share capital subscribed may be available to shareholders of petroleum mining companies exploring or mining for petroleum in Australia, including off-shore areas, where those companies lodge appropriate declarations with the Commissioner of Taxation in respect of the moneys subscribed. By lodging those declarations, certifying that the capital subscriptions have been, or will be, spent on eligible outgoings within a specified period, the petroleum mining companies forgo deductions to which they might otherwise be entitled for capital expenditure.

Payments to producers and importers of phosphate fertilizers. The *Phosphate Fertilizers Subsidy Act* 1963 provides for a subsidy to be paid on phosphatic substances produced in Australia or imported and sold for use in Australia as a fertilizer. Phosphatic substances used as a supplement to stock food are also regarded as being used as a fertilizer. Subsidy is payable at the rate of $12 per tonne in respect of superphosphate where the available phosphorus content is not less than 8.5 per cent or more than 8.9 per cent by weight. Outside this range, subsidy is payable at $138 per tonne of the available phosphorus content of the substance. The intention of the Act is to assist consumers of phosphate fertilizers (primary producers). The Act expires on 30 June 1985.

Payments to producers and importers of nitrogenous fertilizers. The *Nitrogenous Fertilizers Subsidy Act 1966* provides for a subsidy to be paid on inorganic nitrogenous substances produced in Australia or imported and sold for use in Australia as a fertilizer. Nitrogenous substances used as a supplement to stock food are also regarded as being used as a fertilizer. Subsidy is payable at the rate of $20 per tonne of the nitrogen content of which the goods consist. The intention of the Act is to assist consumers of nitrogenous fertilizers (primary producers). The Act expires on 30 June 1985.

Bureau of Mineral Resources, Geology and Geophysics. The role of BMR is:

(i) to develop an integrated, comprehensive, scientific understanding of the geology of the Australian continent, the Australian offshore area and the Australian Antarctic Territory, as a basis for minerals exploration; this to be done where appropriate in co-operation with State Geological Surveys and other relevant organisations and having regard to priorities for the search for minerals approved by the Minister for Resources and Energy;

(ii) to be the primary national source of geoscience data and to publish and provide information; and

(iii) to undertake mineral resource assessments in accordance with programs and priorities approved by the Minister for Resources and Energy with the advice of the BMR.

At 30 September 1983, 507 officers were employed at the BMR, this included 147 professional officers (geologists, geophysicists, chemists, engineers and mineral economists) and 61 research scientists.

BMR's research program is carried out by four Divisions—Geophysics, Continental Geology, Marine Geoscience and Petroleum Geology, and Petrology and Geochemistry. Mineral and petroleum resource assessments are undertaken by the Resource Assessment Division which includes Minerals and Petroleum Branches and a Uranium Resource Evaluation Unit. Other branches are Planning and Programs, Special Projects and Geoscience Services, and a Geoscience Database Branch is proposed.

The BMR maintains laboratories in Canberra engaged on geochemical, geochronological, organic geochemistry, and petroleum technological studies, and basic research into the design and testing of geophysical equipment. It also maintains geophysical observatories at Kowen Forest (Australian Capital Territory), Mundaring (Western Australia), Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in geomagnetic, ionospheric, and seismology research.

State Government assistance

In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and generally give a free technical service to the mining industry.

New South Wales. The primary objective of the Department of Mineral Resources is to promote the responsible development of mineral resources in New South Wales. The Department administers the various Acts (Coal, Petroleum and Mining) and grants titles to encourage and facilitate the exploration for, prospecting and development of, the State's mineral resources. The Department's staff is deployed in many diverse areas of activity to encourage and assist mining and resource development projects by the mining industry.

A wide range of services, information and advice is provided on many subjects including geological and geophysical investigations, scientific and chemical research, geological and metallogenic mapping, prospecting, mining legislation and administrative procedures. The Geological and Mining Museum, one of the States's foremost specialist museums, is maintained by the Department, as is the reference library of geology, mining and allied topics situated at the Department's head office and Bore Core Library situated at Londonderry, near Penrith.

The Department is engaged in the continuous assessment of the State's mineral resources; its coal exploration and assessment programme in particular has identified many coal deposits of high commercial promise.

Victoria. The Department of Minerals and Energy advises on, monitors, co-ordinates and implements energy policy. The Department conducts geological, groundwater and mineral surveys, produces geological maps, and issues scientific and technical reports thereon. Drilling operations are carried out and the results are used in sedimentary basin studies and to evaluate petroleum, mineral and groundwater potential. A comprehensive library and a geological museum are maintained, and a core library retains cores and cuttings from drilling operations. The administration of petroleum, pipeline, hazardous materials, mining and extractive industry legislation ensures that mineral and petroleum exploration and production (both on-shore and off-shore), mining and quarrying are regulated and controlled. Also that the manufacture, transport, storage and use of explosives and the storage and transportation of inflammable liquids and liquefied gases are carried on in a safe and effective manner. Technical assistance and limited loans and grants are available for mineral exploration and prospecting and for approved development operations. Five stamp batteries located throughout the State provide an ore-crushing service to enable test crushing to be made at nominal cost. Information is available on mining law and mineral statistics. Assays of ores; analytical services; advice on metallurgical treatments, industrial pollution and chemical problems are available. Information on the manufacture, handling and use of explosives, inflammable liquids and liquefied gases is also provided. Financial assistance is available to municipalities to reclaim mine-damaged land in areas where a reclamation committee recommends such action.

Queensland. The Department of Mines regulates, encourages and assists the search for and development of mineral resources, including petroleum, working through a system of authorities, leases and licenses issued under Acts of Parliament.

The Department provides assistance to mining by way of grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, assistance to prospectors and geological services. Detailed information is collated from in-house geological studies and seismic surveys and continuous scientific appraisal of results achieved and reported by commercial exploration groups. The information effort is underpinned by a Departmental drilling program focusing on coal and mineral exploration and deep stratigraphic drilling.

The Department carries out a continuous inspection on mine safety and provides an expert technical advisory service to mining organisations. Other activities include research on mine safety and health and the administration of safety regulations on gas installations and storage of explosives. Additionally, the Department maintains an Assay Office at Cloncurry, a District Geologist's Office at Charters Towers and has Inspectors of Mines, both metalliferous and coal, stationed at various major centres throughout the State.

The Queensland Coal Board carries out research and sampling tests of Queensland coals. It also makes funds available to colliery proprietors for equipment and makes grants and/or loans for the provision of amenities for employees and for communities in coal mining districts.

South Australia. The Department of Mines and Energy has as its principal functions the administration of mining and petroleum legislation including the granting of mineral leases and collection of royalties and fees; geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources; drilling to test mineral deposits, petroleum reserves and underground water supplies; the testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories; control of mining and rehabilitation; co-ordinating State Government activities and formulating policy advice in the discovery, assessment and development of all energy resources within the State.

Western Australia. The Western Australian Department of Mines operates fifteen State Batteries throughout the goldfields, for the treatment of ore (principally gold) from prospectors and small mine owners, at a nominal charge. Through its Geological Survey Division, the Mines Department carries out geological investigations and surveys throughout the State. The results of this work are made available in both map and report format. The Government Chemical Laboratories Branch of the Mines Department provides analytical and research services to the mining and mineral exploration industry.

Tasmania. The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery; for sinking, repairing or de-watering of shafts; for construction of dams and water races; for testing and proving a deposit of any mining product; for developmental work; and for diamond and other types of drilling. The Department has available for hire percussion and diamond drills for exploration. Other assistance is rendered to the industry through geological and engineering advice, ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

Northern Territory. The Department of Mines and Energy encourages the development of an efficient mining and processing industry. Through six divisions the Department administers relevant legislation and provides a wide range of services.

The N.T. Geological Survey Division elucidates the regional geology and geophysics of the Territory, researches new mapping, geological survey and mineral search techniques and provides technical information through its computer indexes at Darwin and Alice Springs.

Registration and orderly administration of mineral and petroleum tenure, and provision of essential drafting services fall within the ambit of the Policy and Administration Division.

Mines Division has primary responsibility for the development of policy and legislation relating to exploration and mining industries. The Division also has regulatory responsibility in the fields of occupational hygiene, mine safety and environment protection to ensure the efficient, orderly and safe recovery and utilisation of the Territory's mineral resources. A range of services including technical and financial are also provided to prospectors.

Energy Division has primary responsibility for policy development, and advice to Government, on all energy matters. Its regulatory function in the petroleum exploration and development area is administered from Darwin and Alice Springs.

The Industrial Safety Division provides inspectorial, training and advisory safety services in the fields of construction safety, dangerous goods and machinery safety. These services are provided from the division's offices at Darwin, Alice Springs, Tennant Creek and Katherine.

Resource Economics Division provides advice to the Government on special projects and provides a consultancy service to other Divisions.

Research

Research investigations into problems of exploration, mining, ore-dressing and metallurgy are conducted by Government bodies, by universities, by private enterprise, and by combined efforts of these bodies. A summary of their functions follows. (For further information on research *see* Chapter 25, Science and Technology).

Australian Atomic Energy Commission

For a more detailed description of the activities of the Australian Atomic Energy Commission *see* Chapter 18, Energy.

The Australian Mineral Development Laboratories

Technical consulting, contract research and process design for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel). Operations are based in Adelaide with branch laboratories in Perth, Melbourne and Townsville. This organisation is controlled by a council comprising representatives of the mineral industry, the South Australian Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry, mineralogy, petrology, chemical metallurgy and mineral engineering, process instrumentation and control, water and waste water treatment and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis. Services in the field of pollution and environmental control are also available through the Amdel group, Aspect.

The Baas Becking Geobiological Laboratory

In 1965, the Baas Becking Geobiological Laboratory was established in the Bureau of Mineral Resources building in Canberra under the joint sponsorship of the Commonwealth Scientific and

Industrial Research Organization, the Bureau of Mineral Resources, and the Australian Mineral Industries Research Association (*see* Research by private enterprise, below).

Subjects of current research are ore genesis investigations; Geological research is coordinated with the field research programs of the Bureau of Mineral Resources, Geology and Geophysics.

Bureau of Mineral Resources, Geology and Geophysics

The Bureau of Mineral Resources is the largest geoscience research organisation in Australia. Its role is to develop an integrated scientific understanding of the geology of the Australian continent, its Territories and offshore areas, as a basis for mineral exploration and resource assessment. BMR carries out programs in:

- Fossil Fuels: including their origin and distribution in space and time; onshore sedimentary basin analysis; geophysical investigations of the structure of onshore basins; framework studies of Australian offshore areas; and modern marine processes.
- Minerals: including the origin and distribution in space and time; metallogenic provinces; the weathered zone; and related resources; airborne geophysical mapping and interpretation; crustal geophysics; and the origin and distribution of offshore mineral deposits.
- Groundwater, basin hydrogeology; and fractured rock hydrogeology.
- Earthquake hazards.
- National and international geoscience maps.
- Overseas programs: including land geoscience in south east Asia; marine geosciences in the Southwest Pacific; geoscientific co-operation with China; and Antarctica.
- Petroleum and mineral resource assessment.
- National geoscience data base.

Commonwealth Scientific and Industrial Research Organization

Minerals Research

Minerals research by the Commonwealth Scientific and Industrial Research Organization (CSIRO) is undertaken within the Institute of Energy and Earth Resources. The research has the objectives of improving methods of locating, evaluating, defining and characterising Australia's mineral resources and of planning their recovery, development and effective use consistent with the minimization of environmental stresses. Divisions of the Institute engaged in mineral research are the Division of Geomechanics at Syndal (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.); the Division of Mineral Engineering at Clayton (Vic.); the Division of Mineralogy at Perth (W.A.), North Ryde (N.S.W.) and Canberra (A.C.T.), the Division of Mineral Physics at North Ryde (N.S.W.), Lucas Heights (N.S.W.) and Port Melbourne (Vic.), and the Physical Technology Unit at Ryde (N.S.W.).

Department of Resources and Energy

The functions of the National Coal Research Advisory Committee which was established in 1964 have been incorporated into the National Energy Research, Development and Demonstration Council (NERDDC) which is administered by the Department of Resources and Energy. For details of NERDDC, which advises the Minister for Resources and Energy on matters relating to national energy policy *see* Chapter 18, Energy and Chapter 25, Science and Technology.

University Research

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

Research by private enterprise

Many of the large companies in the mineral industry conduct their own research in dealing with their particular Company's interests. In 1959 the major companies in the industry, formed the Australian Mineral Industries Research Association Limited to co-ordinate and manage sophisticated research programmes on a co-operative basis, carried out by the Australian Mineral Development Laboratories, CSIRO, Universities and by other research organisations.

Since then, the research activity has grown considerably in magnitude covering geology, ore genesis and exploration techniques, mining and rock mechanics, mineral processing, ecology, energy, analytical methods and miscellaneous other items.

International relations

Because Australia is a large supplier of certain minerals to the rest of the world, and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. It was followed by the Second, Third, Fourth, Fifth and Sixth International Tin Agreements, which came into force on 21 February 1962, 21 March 1967, 1 July 1971, 1976 and 1982 respectively. Australia joined the Fourth, Fifth and Sixth Agreements as a 'producing' (i.e. exporting) member, whereas in the first three agreements Australia's status had been that of a 'consuming' (i.e. importing) member. Details of the Second and Third Agreements are given in Year Book No. 57, pages 911–12. Details of the Fourth Agreement are given in Year Book No. 61, page 942, and those of the Fifth in Year Book No. 66, page 376.

The objectives and provisions of the present (Sixth) Agreement are broadly similar to those of its predecessors. The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading, aims at confining the prices within these limits. The Sixth Agreement provides for a larger buffer stock than in the previous Agreements of up to 50,000 tonnes of tin metal. For the first time, financing of the buffer stock is to be shared equally between producers and consumers. In the event of persistent market disequilibrium through causes beyond the control of the buffer stock mechanism, the agreement provides for the regulation of exports and stocks to stabilise the market.

The International Tin Agreement is operated by the International Tin Council, which is made up of the following governments: *Producers*—Australia, Indonesia, Malaysia, Nigeria, Thailand, Zaire; *Consumers*—Belgium-Luxembourg, Canada, Denmark, Finland, France, Germany (Federal Republic of), Greece, India, Ireland (Republic of), Italy, Japan, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom and Yugoslavia. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to quantities consumed. The allocation of votes in each category is periodically reviewed.

International Lead-Zinc Study Group

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem, a series of meetings of interested governments was held at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, Germany (Federal Republic of), Hungary, India, Ireland (Republic of), Italy, Japan, Mexico, Morocco, Netherlands, Norway, Peru, Poland, South Africa (Republic of), Spain, Sweden, Tunisia, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of America, Yugoslavia and Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc.

Association of Iron Ore Exporting Countries (APEF)

Australia is a founder member of the Association of Iron Ore Exporting Countries (APEF). The other members of the Association are Algeria, India, Liberia, Mauritania, Peru, Sierra Leone, Sweden and Venezuela.

The objectives of the Association are to promote close co-operation among Member countries with a view to safeguarding their interests in relation to the iron ore export industry; to ensure the orderly and healthy growth of export trade in iron ore; to assist Member countries to secure fair and remunerative returns from the exploitation, processing and marketing of iron ore and to provide a forum for consultations and the exchange of information on problems relating to the iron ore export industry.

The Association consists of a Conference of Ministers, which meets biennially and is the supreme authority of the Association, a Board comprising representatives of member countries which meets twice a year, and a Secretariat which is located in Geneva.

Intergovernmental Council of Copper Exporting Countries (CIPEC)

The CIPEC was established in 1967 by the Governments of Chile, Peru, Zaire and Zambia as an intergovernmental consultative organisation.

Australia and Papua-New Guinea were admitted as Associate Members and Indonesia as a Full Member in 1975; Yugoslavia was admitted as an Associate Member in 1977. Associate Members may participate in meetings but have no voting rights and are not bound by CIPEC's decisions.

The key objectives of CIPEC are to co-ordinate measures to achieve continuous growth in real earnings from copper exports and to harmonise the decisions and policies of members relating to copper production and marketing.

International Bauxite Association

Australia joined the International Bauxite Association (IBA) as a founder member in October 1974. Other members are Dominican Republic, Ghana, Guinea, Guyana, Indonesia, Jamaica, Sierra Leone, Surinam and Yugoslavia. Members account for about three-quarters of world bauxite production with Australia accounting for nearly one third of world production.

The objectives of the Association are to promote the orderly and rational development of the bauxite industry; to secure for members fair and reasonable returns from the exploration, processing and marketing of bauxite and its products for the economic and social development of their peoples, bearing in mind the recognised interests of consumers; and generally to safeguard the interests of member countries in relation to the bauxite industry.

The Association consists of a Council of Ministers which meets once a year and is the supreme organ, an Executive Board consisting of senior officials which meets three times a year and a Secretariat which is located in Kingston, Jamaica.

The IBA provides members with an opportunity to discuss common problems and evolve co-operative policies to facilitate further development of their bauxite/alumina/aluminium industries. The Association's work is mostly concerned with exchanging views and information on a range of industry matters. The commercial and technical aspects of formulating minimum export prices for bauxite and alumina have received particular attention. In November 1982 the Council adopted recommendations on minimum CIF prices for bauxite and alumina sold by member countries in 1983. Australia was not included in the majority that voted for the recommendations and is not bound by them. The Association publishes a Quarterly Review.

MINERAL INDUSTRY STATISTICS

Statistics in the following pages refer mainly to the mining industry, mineral production, mineral exploration, mineral processing and treatment, and overseas trade.

Mining industry statistics

This section contains statistics of the mining industry in Australia obtained from the annual census of mining establishments. The annual mining census is conducted throughout Australia on an integrated basis with other economic censuses, e.g. the annual census of manufacturing establishments, electricity and gas establishments and the periodic censuses of retail and wholesale trade establishments.

Statistics are also available for *enterprises* engaged in the mining industry. The latest statistics for mining are in respect of 1980–81 and were published in *Enterprise Statistics: Details by Industry Class, Australia,* 1980–81 (8103.0). Enterprise statistics for mining are now produced annually and should be available within two years of the end of the financial year to which they relate. A description of the statistics and broad summary tables, in respect of the 1979–80 and 1980–81 censuses and surveys are given in Chapter 17.

The following table shows key items of data for establishments in Australia for 1981–82 based on the 1978 edition of the *Australian Standard Industrial Classification* (ASIC).

MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY CLASS, 1981–82

Industry		*Establishments at 30 June*	*Average employment over whole year(a)*			*Wages and salaries (b)*	*Turnover*	*Stocks*		*Total purchases, transfers in and selected expenses*	*Value added*	*Fixed capital expenditure less disposals*
ASIC code	*Description*		*Males*	*Females*	*Persons*			*Opening*	*Closing*			
		No.	No.	No.	No.	$'000	$'000	$'000	$'000	$'000	$'000	$'000
	Metallic minerals											
	Ferrous metal ores											
1111	Iron ores	23	7,563	1,139	8,702	211,698	1,379,249	186,750	209,283	735,268	666,514	76,540
1112	Iron ore pelletising	2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
	Non-ferrous metal ores											
1121	Bauxite	6	1,853	245	2,098	46,688	292,583	19,700	22,429	69,880	225,432	46,359
1122	Copper ores	10	4,059	300	4,359	92,951	239,967	52,249	51,416	130,190	108,944	22,502
1123	Gold ores	70	2,622	149	2,771	55,318	213,148	35,604	52,126	112,137	117,533	73,133
1124	Mineral sands	16	1,562	127	1,689	31,253	160,083	48,540	53,475	81,045	83,973	10,970
1125	Nickel ores	5	2,514	245	2,759	74,313	278,925	32,730	32,199	106,935	171,459	73,104
1126	Silver-lead-zinc ores	13	6,828	389	7,217	147,459	610,496	105,781	99,718	226,424	378,009	170,632
1127	Tin ores	77	1,905	150	2,055	34,774	136,937	20,218	23,219	60,283	79,655	22,648
1128	Uranium ores	3	839	133	972	22,964	236,035	51,271	102,831	54,109	233,486	55,533
1129	Non-ferrous metal ores n.e.c.	11	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
11	*Total metallic minerals*	*236*	*31,607*	*3,093*	*34,700*	*754,569*	*3,791,533*	*610,550*	*698,601*	*1,712,750*	*2,166,833*	*559,123*
	Coal, oil and gas											
1201	Black coal	128	30,948	830	31,778	848,620	3,445,802	309,863	468,627	1,390,676	2,213,890	1,166,371
1202	Brown coal	4	4,439	404	4,843	121,857	2,096,193	66,875	84,572	239,947	1,873,943	851,934
1300	Oil and gas	15										
	Construction materials											
1401	Sand and gravel	347	1,732	207	1,939	31,475	218,198	11,635	14,299	105,265	115,597	15,147
1404	Construction materials n.e.c.	450	3,965	400	4,365	75,452	427,895	36,141	43,434	206,488	228,700	31,012
14	*Total construction materials*	*797*	*5,697*	*607*	*6,304*	*106,927*	*646,093*	*47,776*	*57,733*	*311,753*	*344,297*	*46,159*
	Other non-metallic minerals—											
1501	Limestone	55	767	15	782	14,984	61,491	11,667	13,546	33,306	30,065	4,002
1502	Clays	112	294	31	325	4,073	31,135	3,794	4,418	19,126	12,633	1,522
1504	Salt	20	620	89	709	14,932	56,974	12,768	13,809	18,363	39,651	19,572
1505	Non-metallic minerals n.e.c.	123	822	101	923	15,485	88,164	17,187	13,584	49,820	34,740	3,373
15	*Total other non-metallic minerals*	*310*	*2,503*	*236*	*2,739*	*49,473*	*237,763*	*45,416*	*45,357*	*120,615*	*117,088*	*28,469*
	Total mining (excl. services to mining)	**1,490**	**75,194**	**5,170**	**80,364**	**1,881,446**	**10,217,383**	**1,080,480**	**1,354,888**	**3,775,741**	**6,716,050**	**2,652,056**

(*a*) Includes working proprietors. (*b*) Excludes amounts drawn by working proprietors.

Mineral production

This section contains details of the output (quantity and value) of principal minerals produced and the metallic content of ores, concentrates, etc.

The statistics shown have been derived from data collected in the annual mining census and in returns to the various State Mines Departments, supplemented in some cases by information made available by the Department of Resources and Energy and from other sources.

For details of the scope of mineral production statistics and their relation to mining industry statistics, and the principles for measuring the output of minerals, *see* Year Book No. 61 and earlier issues.

Quantity of minerals produced

The following tables show particulars of the quantities of principal minerals produced and contents of principal metallic minerals produced during 1981–82 and earlier years. Further data are available relative to all minerals in the annual publication *Mineral Production, Australia* (8405.0)

QUANTITY OF PRINCIPAL MINERALS PRODUCED

Mineral		*1979–80*	*1980–81*	*1981–82*
METALLIC MINERALS				
Bauxite	'000 tonnes	27,629	25,450	24,690
Copper concentrate	„	812	866	905
Gold bullion(*a*)	kg	16,805	13,806	21,008
Iron ore	'000 tonnes	96,998	93,754	86,786
Lead concentrate	„	654	622	704
Lead-copper concentrate	tonnes	24,185	22,328	31,999
Manganese ore—				
Metallurgical grade	'000 tonnes	2,173	1,485	1,198
Mineral sands—				
Ilmenite concentrate(*b*)	„	1,336	1,259	1,238
Rutile concentrate	„	301	273	220
Zircon concentrate	„	447	461	459
Nickel concentrate	„	347	404	423
Tantalite-columbite concentrate	tonnes	166	235	263
Tin concentrates	„	23,083	24,204	24,604
Tungsten concentrates—				
Scheelite concentrate	„	3,864	3,800	3,364
Wolfram concentrate	„	2,411	2,463	2,017
Uranium concentrate	„	837	2,523	5,086
Zinc concentrate	'000 tonnes	903	845	1,097
COAL				
Black coal—				
Bituminous	'000 tonnes	74,402	88,766	92,119
Sub-bituminous	„	6,847	7,308	7,172
Brown coal—				
For briquettes	„	3,350	2,891	2,658
Other	„	29,544	29,212	34,904
Briquettes	„	1,253	1,081	993
OIL AND GAS				
Crude oil (stabilised)	'000 m³	23,668	23,036	22,313
Natural gas	mill. m³	8,876	10,269	11,294
Ethane	„	147	140	152
CONSTRUCTION MATERIALS(*c*)				
Sand	'000 tonnes	26,241	27,285	28,712
Gravel	„	14,998	14,338	16,088
Crushed and broken stone	„	56,123	53,891	58,478
Other (decomposed rock etc.)	„	38,072	41,162	33,965
OTHER NON-METALLIC MINERALS				
Asbestos (chrysotile)	tonnes	90,524	73,416	34,293
Brick, clay and shale	'000 tonnes	9,005	8,146	7,882
Limestone (including shell and coral)	„	11,521	11,894	12,790
Salt	„	5,335	6,799	4,985
Silica	„	1,884	1,828	1,847

(*a*) Includes alluvial gold. (*b*) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite. (*c*) Excludes dimension stone.

CONTENTS OF PRINCIPAL METALLIC MINERALS PRODUCED

Contents of metallic minerals produced		*1979–80*	*1980–81*	*1981–82*
Alumina (Al_2O_3)	’000 tonnes	n.p.	n.p.	n.p.
Antimony	tonnes	1,435	1,207	1,295
Bismuth	kg	n.p.	n.p.	n.p.
Cadmium	tonnes	1,757	1,676	2,080
Cobalt	”	3,133	3,513	3,075
Copper	”	235,122	246,441	259,633
Gold	kg	18,273	15,991	22,328
Iron(*b*)	’000 tonnes	61,319	59,064	54,886
Lead	tonnes	n.p.	381,377	454,776
Manganese	”	1,039,141	717,209	587,919
Monazite	”	14,033	12,676	10,636
Nickel	”	64,393	73,367	81,424
Palladium	kg	202	464	360
Platinum	”	83	69	65
Selenium	tonnes	—	63	—
Silver	kg	791,760	759,290	887,569
Sulphur	tonnes	369,358	338,734	414,551
Tantalite-columbite ($Ta_2O_5 + Nb_2O_5$)	kg	69,113	91,930	129,635
Tin	tonnes	12,379	12,690	12,750
Titanium dioxide (TiO_2)	”	1,028,859	1,008,386	940,946
Tungstic oxide (WO_3)	mtu(*a*)	449,372	451,245	384,294
Yttrium oxide (Y_2O_3)	kg	7,273	9,187	17,152
Zinc	tonnes	518,040	581 887	623,904
Zirconium dioxide (ZrO_2)	”	297,961	306,079	299,201

(*a*) Metric ton unit (mtu) equals 10 kilograms. (*b*) Excludes iron content of iron oxide not intended for metal extraction. Includes iron contained in iron concentrate.

Value of minerals produced

The following table shows the value of principal minerals produced during 1981-82 and earlier years. Further data are available in the annual publication *Mineral Production, Australia* (8405.0).

VALUE OF PRINCIPAL MINERALS PRODUCED
($’000)

Mineral	*1979–80*	*1980–81*	*1981–82*
METALLIC MINERALS			
Bauxite	n.p.	n.p.	n.p.
Copper concentrate	327,471	288,768	231,952
Gold bullion(*a*)	203,337	184,434	200,408
Iron ore	1,004,308	1,007,307	1,131,186
Lead concentrate	623,973	375,018	252,136
Lead-copper concentrate	41,193	23,904	21,474
Manganese ore—			
Metallurgical grade	95,737	59,207	46,136
Mineral sands—			
Ilmenite concentrate(*b*)	27,252	33,200	36,610
Rutile concentrate	76,481	82,301	61,758
Zircon concentrate	28,175	30,180	37,526
Nickel concentrate	n.p.	n.p.	n.p.
Tantalite-columbite concentrate	12,339	17,594	11,091
Tin concentrate	166,674	143,343	141,716
Tungsten concentrate—			
Scheelite concentrate	34,923	33,739	27,612
Wolfram concentrate	19,768	19,606	15,607
Uranium concentrate	62,342	192,755	356,219
Zinc concentrate	174,065	188,075	n.p.

VALUE OF PRINCIPAL MINERALS PRODUCED—*continued*
($'000)

Mineral	*1979–80*	*1980–81*	*1981–82*
COAL			
Black coal—			
Bituminous	1,665,489	2,276,080	2,777,212
Sub-bituminous	94,607	116,380	143,903
Brown coal—			
For briquettes	..	..	..
Other	91,821	107,052	137,138
Briquettes	24,938	22,230	27,045
OIL AND GAS			
Oil and Gas	*1,190,260*	*1,665,786*	*1,779,989*
CONSTRUCTION MATERIALS(*c*)			
Sand	76,738	95,958	110,239
Gravel	52,612	61,030	80,566
Crushed and broken stone	252,376	263,159	325,406
Other (Decomposed rock etc.)	54,141	80,768	90,535
OTHER NON-METALLIC MINERALS			
Asbestos (chrysotile)	27,240	25,735	14,464
Brick clay and shale	23,054	23,706	27,029
Gems			
Opal(*d*)	64,135	49,490	45,374
Sapphire	24,672	19,783	22,675
Limestone (incl. shell and coral)	42,585	44,153	58,785
Salt	40,871	66,485	52,177
Silica	14,362	15,858	18,494

(*a*) Includes alluvial gold. (*b*) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite. (*c*) Excludes dimension stone. (*d*) Partly estimated.

Foreign participation of the mining industry in Australia

Summary information on foreign participation in the mining industry in Australia is shown in Chapter 24, Overseas Transactions. More detailed statistics are available in *Foreign Ownership and Control of the Mining Industry and Selected Mineral Processing Industries, Australia 1981–82* (5317.0) and *Foreign Control in Mineral Exploration, Australia 1975–76* (5323.0).

Mineral exploration (other than for petroleum and oil shale)

Definition

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining or quarrying operations (including the construction of drives, shafts, winzes, etc. in underground mines, and the preparation of quarrying sites, including overburden removal, for open-cut extraction).

Sources of statistics

The statistics of exploration for minerals *other than petroleum and oil shale* are derived from the annual mineral exploration census conducted by the Australian Bureau of Statistics in each State and the Northern Territory (in New South Wales the census is conducted jointly with the State Department of Mineral Resources).

Classification

The data obtained in the mineral exploration census are divided into the following categories:

(a) *Private exploration on production leases*—relates to exploration carried out on the production lease by privately-operated mines currently producing or under development for the production of minerals.

(b) *Other private exploration*—relates to exploration carried out by private enterprises on areas covered by exploration licences, authorities to enter, authorities to prospect and similar licences and authorities issued by State Governments for exploration of minerals. Also included is exploration by private enterprises which is not directly connected with areas under lease, licence, etc.

(c) *Exploration by government*—relates to exploration of minerals carried out by Federal and State Government Departments, local government authorities and business undertakings operated by those departments or authorities.

Expenditure, metres drilled

The following table shows expenditure and metres drilled on private mineral exploration other than for petroleum and oil shale in Australia during the last six years.

PRIVATE MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM AND OIL SHALE)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Expenditure ($'000)—						
On drilling	36,139	50,019	50,729	72,408	126,088	141,872
Other	97,835	108,378	131,780	213,722	344,401	433,700
Australia	**133,974**	**158,397**	**182,509**	**286,130**	**470,489**	**575,572**
Metres drilled ('000)—						
Drilled-core	469	410	639	617	743	648
Drilled-non-core	1,364	1,919	1,689	2,299	3,222	3,377
Australia	**1,834**	**2,329**	**2,328**	**2,917**	**3,965**	**4,025**

Oil shale exploration

Statistics of exploration for oil shale are derived from an annual exploration census conducted by the Australian Bureau of Statistics.

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of oil shale (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining operations (including the construction of drives, shafts, winzes, etc. in underground mines, and overburden removal, for open-cut extraction).

In 1981-82 expenditure in Australia on private exploration for oil shale amounted to $7,125,000 with 32,000 metres being drilled.

Petroleum exploration

Source of statistics

These statistics of expenditure on petroleum exploration have been obtained by the addition of values collected in a quarterly survey conducted by the Australian Bureau of Statistics. Other data shown were collected by the Bureau of Mineral Resources, Geology and Geophysics. Further information relating to petroleum exploration is published by the Australian Bureau of Statistics in its annual publication *Mineral Exploration, Australia* (8407.0) and by the Bureau of Mineral Resources in *The Petroleum Newsletter* (issued quarterly) and *The Australian Mineral Industry Annual Review.*

Scope

Petroleum exploration consists of the search for and/or appraisal of deposits of crude oil and/or natural gas and natural gas liquids by geological, geophysical, geochemical, and other exploration methods, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the costs of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work where these are undertaken primarily for purposes of exploration for deposits of petroleum. Details of developmental oil and/or gas wells are excluded.

Operations

The following table shows particulars of expenditure, and wells and metres drilled in petroleum exploration in recent years.

PETROLEUM EXPLORATION

		1979-80	1980-81	1981-82
Expenditure—				
Private sources	$'000	294,709	368,330	803,983
Government sources	$'000	5,020	5,351	6,797
Total	**$'000**	**299,729**	**373,683**	**810,781**
Wells (a)—				
Drilled (i.e. those which reached final depth)—				
As oil producers	No.	1	14	21
As gas producers	No.	8	24	38
Plugged and abandoned	No.	43	56	99
Total	**No.**	**52**	**94**	**158**
Average final depth of wells drilled	m	2,460	1,747	1,999
Drilling still in progress at 31 December (uncompleted holes)	No.	4	11	17
Wells drilled or drilling over 3,000 metres	No.	14	24	18
Metres drilled (a)—				
Completed wells	m	127,403	180,157	296,818
Uncompleted holes	m	10,205	19,151	25,566
Total	**m**	**137,608**	**199,308**	**322,384**

(a) *Source*: Bureau of Mineral Resources, Geology and Geophysics. Data relates to years ended 31 December.

Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only a part of mineral technology, as few minerals can be directly used in the form in which they are mined. In most cases minerals must undergo considerable processing and treatment before utilisation. The sectors of the economy which carry out this work are classified for statistical purposes to Manufacturing Industry (*see* Chapter 17, Manufacturing and Internal Trade).

Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during recent years.

PRODUCTION (a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN

Commodity		*1979–80*	*1980–81*	*1981–82*
METALS(*b*)				
Non-ferrous—				
Alumina	'000 tonnes	7,290	7,235	6,651
Refined aluminium	tonnes	283,006	344,753	380,457
Blister copper(*c*)	"	163,608	167,778	177,344
Refined copper	"	137,000	159,437	163,052
Lead bullion (for export) (*c*)	"	167,744	149,027	180,675
Refined lead	"	204,287	206,127	207,242
Refined zinc	"	299,606	297,871	301,266
Refined tin	"	5,249	4,669	3,617
Ferrous—				
Pig iron	'000 tonnes	7,481	7,335	6,606
Steel ingots	"	7,374	7,012	6,198
Precious—				
Refined gold(*d*)	kg	15,038	12,494	17,773
Refined silver	"	293,966	315,584	325,105

PRODUCTION (a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN—*continued*

Commodity		*1979–80*	*1980–81*	*1981–82*
FUELS				
Coal products—				
Metallurgical coke	'000 tonnes	4,302	4,676	4,198
Brown coal briquettes	,,	1,230	1,081	993
Petroleum products—				
Diesel-Automotive oil	'000 tonnes	5,958	6,137	6,445
Industrial fuel and marine fuel	,,	991	985	775
Fuel oil for burning	,,	4,674	3,854	3,285
Automotive petrol	mil. litres	14,370	14,002	14,375
BUILDING MATERIALS				
Clay bricks	millions	2,172	2,287	2,234
Portland cement	'000 tonnes	5,201	5,656	6,136
Plaster of paris	,,	419	443	480
Plaster sheets	'000 sq m	54,770	63,617	63,768
CHEMICALS				
Sulphuric acid	'000 tonnes	2,153	1,976	2,039
Caustic soda	tonnes	n.p.	n.p.	n.p.
Superphosphate(*e*)	'000 tonnes	4,202	3,557	3,464

(*a*) Some products exclude production of single establishment manufacturing establishments employing less than four persons and production of establishments predominantly engaged in non-manufacturing activities but which may carry on in a minor way, some manufacturing. (*b*) Excludes secondary metal with the exception of pig iron and steel ingots. *Source*: Bureau of Mineral Resources, Geology and Geophysics (non-ferrous and precious metals only). (*c*) Metallic content. (*d*) Newly-won gold of Australian origin. (*e*) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate, i.e. 22% P_2O_5 equivalent.

Overseas trade

Exports and imports

For particulars of the quantities and values ($f.o.b. port of shipment) of the principal minerals and products exported from and imported into Australia during recent years. *See* Chapter 24. Overseas Transactions.

Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows selected items exported during 1981 and their principal metallic content as estimated by assay.

PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES ETC. EXPORTED FROM AUSTRALIA, 1982

	Metallic contents—estimated from assay							
Ores and concentrates, etc.	*Copper*	*Lead*	*Zinc*	*Tin*	*Iron*	*Tungstic Oxides*	*Gold*	*Silver*
	tonnes	tonnes	tonnes	tonnes	'000 tonnes	tonnes	kg	kg
Copper concentrate . .	47,944	2,297	1,884	—	—	—	395	30,538
Blister copper	7,147	—	—	—	—	—	796	1,536
Copper matte, slags, etc. (*a*)	9,366	7,054	—	—	—	—	436	9,745
Lead concentrate . . .	5,027	36,391	6,273	—	—	—	1,342	91,144
Lead bullion	—	165,433	—	—	—	—	27	432,711
Lead slags and residues .	—	1,941	—	39	—	—	—	26
Zinc concentrate . . .	944	4,755	289,370	—	—	—	288	38,079
Zinc slags and residues .	—	—	4,506	—	—	—	—	—
Tin concentrate	—	—	—	7,075	—	—	—	—
Iron ore—								
Pellets	—	—	—	—	1,615	—	—	—
Fines	—	—	—	—	25,501	—	—	—
Lump	—	—	—	—	18,539	—	—	—
Scheelite concentrate . .	—	—	—	—	—	2,226	—	—
Wolfram concentrate . .	—	—	—	—	—	1,188	—	—
Total metallic content . . .	**70,429**	**217,872**	**302,034**	**7,114**	**45,655**	**3,414**	**3,283**	**603,780**

(*a*) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

Prices

The following table shows average prices of some principal refined metals and ores and concentrates on Australian and certain major overseas markets. Prices of minerals such as iron ore, coal and bauxite are not shown as these minerals are commonly sold on a contract basis rather than on an open market basis.

AVERAGE DAILY PRICES OF SELECTED METALS AND METALLIC ORES AND CONCENTRATES: AUSTRALIAN AND OVERSEAS MARKETS(*a*)

(*Source:* Bureau of Mineral Resources, Geology and Geophysics)

METALS(*a*)

	Tin				*Aluminium*		*Gold*		*Silver*	
Period	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Straits ($Mal-picul)*	*Nickel U.S.A. ($US—lb)*	*Aust. ($A—tonne)*	*U.S.A. (USc—lb)*	*Premium markets ($A—f. oz) Australia and Overseas*	*U.K. ($US—f. oz)*	*Aust. ($A—kg)*	*U.K. (Stg new pence—f. oz)*
1981 . .	13,363.32	7,071.44	(*b*)32.34	3.45	1,501.25	61.05	407.22	459.99	298.82	515.07
1982 . .	10,483.49	7,320.35	(*b*)30.17	3.25	1,370.00	47.58	373.51	375.95	244.71	455.78
1982										
Highest	15,639.00	9,000.00	(*b*)35.50	3.29	1,370.00	52.25	511.00	488.50	342.48	685.15
Lowest	13,002.00	5,460.00	(*b*)29.00	3.20	1,370.00	43.57	291.85	297.00	182.58	285.10

	Copper		*Lead*			*Zinc*			
Period	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*U.S.A. (USc—lb)*	*Aust. ($A—tonne)*	*L.M.E. (£Stg—metric ton)*	*Prod. (Stg—ton)*	*U.S.A. (USc—lb)*
1981 . . .	1,535.83	863.82	662.53	362.69	37.30	798.54	424.01	914.04	45.44
1982 . . .	1,474.50	846.73	622.61	310.98	27.14	848.96	425.42	847.83	39.05
1982									
Highest	1,620.00	933.50	650.00	372.50	38.00	877.00	461.50	950.00	47.00
Lowest	1,240.00	684.50	600.00	263.50	19.50	796.00	369.00	800.00	36.00

ORES AND CONCENTRATES

Period	*Tin Aust. ($A–mtu)*	*Wolfram Europe (£Stg–mtu)*	*Ilmenite Europe ($A–metric ton)*	*Rutile Europe ($A–metric ton)*	*Zircon Europe ($A–metric ton)*
1981	112.55	140.54–144.63	24.00–25.00	288.33–299.17	82.08–87.08
1982	114.34	102.17–106.50	26.50–28.92	253.33–265.00	110.42–115.42
1982					
Highest	118.85	130.00	30.00	290.00	120.00
Lowest	104.30	76.00	24.00	250.00	100.00

(*a*) Where a daily price does not actually exist for a commodity, daily prices have been imputed from price data which are available.
(*b*) Shown in $ kg.
NOTE: Prices data shown are those quoted in the relevant markets and are mainly derived from information collected and compiled by the Bureau of Mineral Resources. Overseas data are supplied to the Bureau of Mineral Resources by the *Metal Bulletin* and *Metals Week*.

REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

(*Source:* Bureau of Mineral Resources, Geology and Geophysics)

Major developments in the Australian mineral industry during 1982 are reviewed briefly in subsequent parts of this section. Additional information on developments in the industry is available in *Australian Mineral Industry Annual Review* 1982 published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during the year. The *Australian Mineral Industry Quarterly*, Volume 35, Number 4, details Australia's identified mineral resources, 1982.

General Review of 1982

The gross domestic product (GDP) of Australia in 1981–82 was $147,576 million, of which an estimated $9,100 million was generated by the mineral industry, excluding smelting and refining. If smelting and refining were included, an estimated $2,200 million could be added to this figure, thus making the mineral industry the largest primary sector contributor to the GDP. Australia's export trade again increased in total value, although in real terms a decline was evident. Japan, USA and EEC were the main markets for mineral commodities.

Increased output and higher prices for some major commodities were sufficient to bring about yet another record ex-mine value of minerals produced in Australia in 1982 of about $9,870 million. The greater part of this increase was accounted for by the energy minerals, coal, crude oil and natural gas. Most other major commodities recorded downturns in quantities and values of production reflecting a continuation of gloomy conditions on world markets. Lead, copper, gold, and silver output was higher than in 1981, but output of nickel, was lower. Production of uranium oxide (yellowcake) increased by more than 50% because of output from the newly operational mine and concentrator at Ranger, N.T. The downturn in the world steel industry resulted in reduced demand for Australian iron ore and manganese, although there was a slight increase in demand for Australian steel products. Because of reduced demand for rutile, and increased supplies, Australian mineral-sands operators cut back production, particularly on the east coast.

Imports—1982

The value of imports of mineral products rose by 30 per cent to $3,099 million. Crude oil and other refinery feedstock was the largest single mineral import, rising by 38 per cent to $2,778 million. Other significant mineral imports were gem diamonds and fertiliser materials (phosphate rock, elemental sulphur, and potassium salts). Imports of mineral primary products accounted for 13.1 per cent of the total value of merchandise imports compared with 9.8 per cent in 1981. Although the value of imports rose, the surplus in the balance of mineral trade rose slightly, increasing from $4,700 million in 1981 to $4,892 million in 1982.

Exports—1982

Australia's mineral exports rose in current dollars by 33 per cent to $9,870 million, a new record. Those mineral commodities which lost ground in current dollars as a result of depressed world industrial and trading conditions included rutile, tin and copper. Black coal exports increased in both quantity and current dollar terms and remained the largest single export earner, accounting for $2,551 million or 32 per cent of the total value of mineral primary products.

Iron ore was the second largest export earner with a value of $1,427 million (an increase of 27 per cent) followed by alumina which increased in value by 2 per cent to $1,100 million. In total, black coal, iron ore and alumina accounted for nearly 64 per cent of the total value of exports of mineral primary products. A significant contribution was also made by gold, silver, uranium and zinc.

Pattern of mineral trade—1982. Australia exported metals and minerals to more than 100 countries. Japan accounted for 43.5 per cent of Australian exports by value. Principal exports of mineral primary products to Japan were black coal, iron ore, aluminium, alumina, bauxite, copper, nickel, manganese ore and mineral sands.

The proportion by value of Australian mineral exports to the EEC was 18.8 per cent (including 6.8 per cent to the UK), and to the USA 10.9 per cent. To the EEC countries, exports were mainly iron ore, black coal, lead and copper, and to the USA alumina, nickel, bauxite, manganese ore, mineral sands, iron ore, lead, and zinc.

Bauxite, Alumina and Aluminium

In 1982, production of bauxite decreased by 6.6 per cent to 23.93 million tonnes, while aluminium production increased slightly to 380,796 tonnes. Australia was again the world's largest producer of bauxite and alumina.

The commissioning of the new alumina refinery at Wagerup, W.A., has been delayed until at least 1984. Initial rated capacity is to be 500,000 tonnes per year.

The first stage of the alumina refinery at Worsley, W.A., was completed in late 1983. Initial rated capacity is one million tonnes per year, with ultimate capacity of two million tonnes per year. Bauxite will be supplied from Mount Saddleback, W.A. All alumina produced will be exported.

Enlargement of the Kurri Kurri, N.S.W. aluminium smelter has been deferred due to the depressed world aluminium market. The planned expansion will increase total capacity from 90,000 to 135,000 tonnes per year. Comalco's aluminium smelter at Boyne Island, near Gladstone, Qld, is supplied with alumina from the nearby Queensland Alumina Ltd (QAL) refinery. The smelter has a first-stage design capacity of 103,000 tonnes per year and it is planned to expand capacity to 412,000 tonnes by the end of the decade. The rated capacities of the other two Australian aluminium smelters, at Point Henry, Vic., and Bell Bay, Tas., are 165,000 and 117,000 tonnes per year respectively. Point Henry uses Western Australian alumina while Bell Bay obtains its alumina from Queensland.

Construction of the Portland, Vic., smelter, which was to be commissioned in 1983, has been delayed. Initial capacity is to be 132,000 tonnes per year. The Tomago, N.S.W. smelter was commissioned in mid-1983; it will have an initial capacity of 110,000 tonnes per year. The proposed Lochinvar, N.S.W., smelter has been abandoned.

Copper

A summary of the copper mining industry in Australia 1953 to 1975 and the sufficiency of present ore reserves was published in the *Australian Mineral Industry Quarterly*, Vol. 30, No. 1.

In 1982 mine production of copper increased to 245,322 tonnes. Western Mining Corporation Ltd and BP Australia Ltd entered into an Indenture Agreement with the South Australian Government on the development of the Olympic Dam copper project at Roxby Downs, S.A. The proposed agreement commits the two companies to spend at least a further $50 million on the feasibility stage by the end of 1984, with a decision to proceed required within three years of that date. In July 1982, WMC stated that widely spaced drilling has shown the Olympic Dam mineralisation to extend over an area of 7 km by 4 km and the estimated amount of mineralisation so far drilled to be about 2,000 million tonnes at an average grade of 1.6 per cent copper, 0.6 kg/tonne uranium oxide (U_3O_8), and 0.6 g/tonne gold.

The Mount Chalmers mine near Mount Morgan, the Mammoth mine in northwest Queensland, and the Dianne in north Queensland ceased production in 1982.

Broken Hill Associated Smelters Pty Ltd announced the proposed construction of a plant at Port Pirie, S.A., to produce copper metal from by-product materials. Capacity will be 4,000 tonnes of refined copper a year; the plant will cost about $12.3 million.

Iron

A summary of growth of the Australian iron ore industry 1965 to 1975 was published in the *Australian Mineral Industry Quarterly,* Vol. 29, No. 1.

Mine production of iron ore in 1982 was 87.7 million tonnes, 4.5 per cent higher than in 1981. Export of iron ore and iron ore pellets was 72.6 million tonnes valued at $1,427 million. Australia remained the second largest exporter of iron ore and the third largest producer.

Cliffs Robe River Iron Associates in 1982 completed the transfer of all mining operations to East Deepdale, 24 km west of the deposits mined initially.

Production at the Mount Goldsworthy deposits ceased at the end of 1982, the reserves exhausted. Agreement was reached with Japanese steel mills for a two year extension of sales contracts from April 1983 to enable production to continue at Shay Gap and Sunrise Hill at a rate of 4.4 million tonnes per year.

Production at Koolyanobbing fell substantially early in 1982 following the closure of the Kwinana blast furnace which it mainly supplied.

Silver, lead and zinc

Mine production of lead and zinc metal increased in 1982 to 455,338 tonnes and 664,800 tonnes respectively, with lead being 16 per cent more and zinc metal 32 per cent more than in 1981.

A summary of the Australian lead and zinc industry from 1953 to 1973 was published in the *Australian Mineral Industry Quarterly,* Vol. 27, No. 4.

Mining capacity for silver-lead-zinc ore at Mount Isa, Queensland, was increased by 20 per cent to 180,000 tonnes of contained lead and proportional increases in zinc and silver production.

Production at the Elura lead-zinc-silver deposit, near Cobar, N.S.W., began in early 1983.

Black coal

Raw black coal production in 1982 was a record 119.0 million tonnes, 8 per cent higher than in 1981. The output of saleable coal rose by 6.5 per cent to the record level of 98.2 million tonnes. Domestic consumption increased slightly from 37.4 million tonnes in 1981 to 37.5 million tonnes in 1982, despite a drop in use for electricity generation of almost 0.8 million tonnes. Exports fell by almost 1 million tonnes to 49.8 million tonnes in 1982 but the value of exports rose to $2,544 million. Of total exports 32.3 million tonnes were shipped to Japan.

Demand for steaming coal on the international market remained high. As a result Australian exports of steaming coal rose by 21 per cent to 12.7 million tonnes. At the same time, the continuing world recession resulted in a 7 per cent fall in exports of coking coal to 37.1 million tonnes. Several new mines had commenced operation or were at an advanced stage of construction by the end of 1982.

Papers dealing with the Australian coal industry have been published in the *Australian Mineral Industry Quarterly* Vol. 31, No. 1 and Vol. 34, No. 2.

Petroleum

1982 was a record year for petroleum exploration in Australia. At the end of 1982 there were 24 fields producing stabilised crude oil (which includes condensate marketed as part of a crude oil stream): Moonie, Alton, Conloi, Kincora, Cabawin, Bennett, Riverslea, Thomby Creek, Yapunya, Yellowbank Creek, Silver Springs and Trinidad in Queensland: Barrow Island, Blina, Yardarino and Dongara in Western Australia; and Barracouta, Halibut, Mackerel, Cobia, Tuna, Kingfish, Snapper and Marlin offshore from Victoria in Bass Strait. The production of stabilised crude oil in 1982 amounted to 21,700 megalitres, a decrease of 5.1 per cent over the 1981 production level.

Natural gas production in 1982 was 11.6 million cubic metres, an increase of about 3 per cent over the 1981 production level. About 17 per cent of natural gas production was used in the field and processing plants, the balance being sold mainly as fuel to markets in New South Wales, Queensland, Victoria, South Australia and Western Australia.

Forty-four offshore exploration wells were drilled in 1982, 28 more than in 1981. Metres drilled increased from 44,946 in 1981 to 126,288 in 1982. At 30 June 1983 there were nine offshore drilling vessels operating in Australian waters.

Offshore development drilling continued in 1982 in the Gippsland Basin and continued on the Snapper platform (6 wells). On the West Kingfish platform development drilling started, and the Cobia and Fortescue platforms were installed in October 1982. The fabrication of the Flounder platform was well in hand. Major development work commenced on the North West Shelf project during 1982 and by the end of the year the jacket for the first offshore platform was in position and work was in progress on the platform. Site preparation and fabrication for onshore treatment facilities was well in hand and laying of the underwater gas pipeline to shore was completed.

Onshore exploration drilling activity rose from 142 in 1981 to 182 in 1982. Metres drilled increased slightly from 325,651 in 1981 to 325,795 in 1982. Drilling in 1982 was mainly centred in the Bowen-Surat Basin in Queensland, the Cooper Basin in South Australia and the Perth, Carnarvon and Canning Basins in Western Australia.

Eighty-nine onshore development wells were drilled in 1982, 48 more than in 1981. Metres drilled almost doubled from 85,232 in 1981 to 152,780 in 1982. New developments included construction of the Cooper Basin liquids scheme whereby petroleum liquids will be piped 659 kilometres from the Cooper Basin to a fractionation plant at Port Bonython near Whyalla.

Production leases were granted for the Mereenie oil field in November 1981 following agreement with the Aboriginal land owners on royalties. A 20 well, two year appraisal program is under way and further assessment of the resource is expected as more wells are drilled. Present oil reserves are estimated at 64 million barrels and recoverable gas reserves are put at 0.9 TCF. A contract was signed in November 1981 for the use of Palm Valley gas in power generation at Alice Springs. Tenders for construction of a pipeline between Palm Valley and Alice Springs were called in late 1982.

In 1982 there were 15 significant oil discoveries and 27 significant gas discoveries.

Nickel

A summary of the growth of the Australian nickel industry was published in the *Australian Mineral Industry Quarterly,* Vol. 28 No. 4.

Mine production of nickel in ore and concentrates was 87,552 tonnes in 1982. Australia was the second largest world producer after USSR. Concentrates from Kambalda, Agnew and Mount Windarra are smelted at the Kalgoorlie nickel smelter. Some of the matte produced is railed to the Kwinana nickel refinery to be refined to nickel metal and the remainder is exported. Nickel-laterite ore mined at Greenvale, Queensland, is treated at the Yabulu nickel treatment plant to produce nickel oxide sinter for export.

Mineral sands

The history of the mineral sands industry is presented in the *Australian Mineral Industry Quarterly,* Vol. 25, No. 1.

Australia is still the world's largest producer and exporter of natural rutile, ilmenite, zircon and monazite. Output of rutile, ilmenite and monazite concentrates was reduced but the production of zircon concentrates increased.

Diamonds

Evaluation of the diamond deposit at Argyle, W.A., continued. The deposit consists of the AK-1 kimberlite pipe, overlying scree, and the Upper Smoke Creek and Limestone Creek alluvials. Total diamond output during pilot testing until the end of 1982 amounted to 829,377 carats. Commercial production from the AK-1 pipe is planned to start in January 1985; commercial production from the Upper Smoke Creek alluvials began in January 1983.

Uranium

Production of uranium in Australia in 1982 was 5,215 tonnes of yellowcake (4,422 tonnes contained u), 56 per cent greater than in 1981. The increase was mainly due to the production from the Ranger mine, N.T., which was in full production for the whole year. Nabarlek mine, N.T., continued to treat ore stockpiled before the deposit was mined out in 1979. Mining operations ceased at Mary Kathleen, Qld, and the treatment plant closed down later in the year. No other mine is in production. 1982 exports were 5,460 tonnes of yellowcake.

BIBLIOGRAPHY

ABS Publications

Monthly Summary of Statistics (1304.0).
Digest of Current Economic Statistics, Australia (1305.0).
Census of Mining Establishments: Summary of Operations (Preliminary) by Industry Class, Australia (8401.0).
Census of Mining Establishments: Details of Operations by Industry Class, Australia (8402.0).
Australian Mineral Industry Quarterly (8403.0).
Mineral Production, Australia (8405.0).
Mineral Exploration, Australia (8407.0).

Other publications

AUSTRALIAN ATOMIC ENERGY COMMISSION; *Annual Report.*
BUREAU OF MINERAL RESOURCES; *Australian Mineral Industry Annual Review.*

CHAPTER 17

MANUFACTURING AND INTERNAL TRADE

MANUFACTURING

Introduction

History

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book.

Decentralisation and manufacturing industries

The decentralisation of secondary industries, and the steps taken by the Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book.

Bounties on manufacture

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards. (*See* Chapter 22, Public Finance, for products on which bounties are paid.)

Government authorities

Industries Assistance Commission

The Industries Assistance Commission is a statutory authority which came into existence on 1 January 1974 as a result of the passing of the *Industries Assistance Commission Act* 1973 by the Commonwealth Parliament. The Commission replaced the Tariff Board, which since 1921 had been responsible for advising the Government on assistance for industries mainly in the secondary sector of the economy.

The Commission is an advisory body whose functions are to hold inquiries and make reports to the Government on assistance to industries in the primary, secondary and tertiary sectors of the economy. The Commission also has a responsibility to report annually on the general structure of industry assistance and its effects on the economy.

A reference from the Government is the official document directing the Commission to inquire and report on certain matters. The Government is required to seek the Commission's advice before it makes changes in the long term assistance afforded industries. References mainly arise from representations to the Government from organisations, companies or individuals seeking assistance. Some references arise from Government commitments to review assistance. The Commission itself has the power to initiate an inquiry under certain circumstances.

Public hearings are held by the Commission in Canberra and in capital cities and regional centres throughout Australia. Any evidence presented to the Commission must be on oath or affirmation. The inquiry subject and the date and location of public hearings are advertised in the press and advised by Commission circular. The Commission normally releases draft reports to give interested parties an opportunity to examine and comment on these reports within the Commission's public inquiry system before the final report is submitted to Government.

After receiving a final report from the Commission, the Government decides whether or not the Commission's advice should be followed. If it decides that assistance afforded a particular industry should be changed, this usually involves introduction of a proposal to this effect in Parliament. The final responsibility for the assistance given to industries within Australia rests with Parliament.

Copies of the Commission's annual reports and final inquiry reports are sold by Australian Government Publishing Service bookshops after being released by the Government. Draft reports are only available from the Commission.

Temporary Assistance Authority

The Temporary Assistance Authority (TAA), which replaced the Special Advisory Authority set up under the Tariff Board Act, came into operation on 1 January 1974 under the provisions of the *Industries Assistance Commission Act* 1973 (since amended).

The main function of the TAA is to undertake inquiries and submit reports to the Government within 45 days of receipt of a reference from the Government on the question of whether urgent action is necessary to provide assistance to any industry that is experiencing difficulty due to the importation of specified goods. If urgent action is necessary the Authority recommends the nature and extent of the assistance to be provided.

The Authority's reports on individual inquiries are normally made public once the Government's decision is announced and are available, as is the annual report, from the Australian Government Publishing Service bookshops.

Bureau of Industry Economics

The Bureau of Industry Economics has been established by the Australian Government as a centre for research into the manufacturing and commerce sectors. Formally attached to the Department of Industry and Commerce, it has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- carry out research work needed to assist the Government in the formation of industrial policy
- assist the Industries Assistance Commission and other government bodies by making submissions on the results of its research
- attract a high standard of professional staff and publish its research findings
- complement the work of other research agencies and co-operate with universities and colleges in developing research programs.

Activities coming within the Bureau's research area include manufacturing; building; wholesale and retail trade; entertainment, travel and accommodation; warehousing and storage and personal and business services. These currently contribute well over 50 per cent of gross domestic product in Australia and absorb an even larger share of the labour force.

The Bureau is also concerned with developments in mining, rural industry, public and private services and international trade and investment where these impinge on the manufacturing and commerce sectors.

A Council of Advice advises the Minister of Industry and Commerce about the Bureau's work and ensures that it is relevant to contemporary and long term issues in manufacturing and commerce. Its members are drawn from a wide range of industries and backgrounds, including the universities and the trade union movement. The Council assists with the work of the Bureau and the effective dissemination of the results of the Bureau's work.

The techniques of economic analysis used include supply and demand estimation, industry structure-performance relationships, input-output analysis, econometrics, cost-benefit methods and socio-demographic investigations. Technical and social factors affecting industry structure and performance are also taken into account in investigations.

The staff of the Bureau consists of approximately 60 officers with backgrounds in business, government and university teaching and research.

Research projects often require special surveys where existing data sources are inadequate or more detailed information is required for particular industries. In certain projects the Bureau undertakes joint research with other organisations and consultants are engaged where this will significantly enhance the quality of the research.

Current research areas include:

- the retail pharmacy industry
- regional development and structural change
- corporate taxation
- economic effect of shorter working hours
- productivity
- tourism
- structural adjustment in heavy engineering
- Australian direct investment abroad
- investment behaviour in manufacturing
- trade relations with north-east Asia.

When initial findings are available, working papers are prepared to discuss the methods employed and to ensure that specialist qualified observers have an opportunity to comment on objectives of the research programme. By 1983 thirteen final research reports on projects and five information bulletins had been published.

Standardisation

The *Commonwealth Scientific and Industrial Research Organisation* (CSIRO) is obliged by two Acts of Parliament to be associated with national standards. The functions of CSIRO as laid down by these Acts involve establishing, developing and maintaining standards of measurement of physical quantities and to promote the use of these standards.

CSIRO first undertook this role in 1938 after government acceptance of a recommendation by a Secondary Industries Testing and Research Committee that these functions were essential for the successful development of manufacturing industry in Australia. Since that time, standards and calibrations have been established for a very wide range of physical quantities, extending considerably beyond the minimum required by law. From 1978, CSIRO has been responsible for first level calibrations in the defence area.

In certain specialist areas, CSIRO has authorised other bodies to carry out functions related to standards. CSIRO has authorised the *Australian Atomic Energy Commission* (Department of Resources and Energy) and the *Australian Radiation Laboratory* (Department of Health) to maintain standards for quantities relating to ionising radiations, such as radioactivity, exposure, and absorbed dose. It has also authorised the *Division of National Mapping* (Department of Resources and Energy) and the *Australian Telecommunications Commission* (Department of Communications) to maintain working standards of time interval and frequency.

At the international level, a treaty now widely known as the Metric Treaty has been signed by 45 member nations, including Australia. The *International Bureau of Weights and Measures* (BIPM) coordinates activities under the Treaty by providing a mechanism for making international agreements in scientific metrology and for coordinating research on basic scientific problems in measurement. The CSIRO has representatives on five of the BIPM's Consultative Committees, while the *Australian Radiation Laboratory* and the *Australian Atomic Energy Commission* (as CSIRO agents) are represented on another Consultative Committee.

The *Standards Association of Australia* is the organisation responsible for the preparation, on a national basis, of Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from the sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subject under consideration. This assistance is on a voluntary basis.

Preparation of a standard is undertaken in response to a request from any responsible source, subject to verification that the standard will meet a genuine need. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in many cases where safety of life or property or consumer protection is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

The *National Standards Commission* was established in 1948 and is presently located at North

Ryde, Sydney. The original purpose was to advise the Minister for Science and Technology on matters relating to weights and measures. It operated under the *Weights and Measures (National Standards) Act*, 1948. This was replaced in 1960 with a new Act which took account of advances in measuring technology and its impact in Australia. Amendments to the 1960 Act were made in 1966 and 1978. The present role of the Commission provides for the establishment and use throughout Australia of uniform units of measurement, uniform standards of measurement of physical quantities and for the examination and approval of the patterns of measuring instruments used for trade in order to control design and quality.

The Commission has close contacts with all States and Territorial weights and measures authorities who ensure by regular inspections that trade instruments continue to comply with the approved patterns.

Close liaison is also maintained with the manufacturing industry, retailers, consumers and other users to ensure a balance between design, quality and cost.

The Commission has regular contacts overseas and provides the Australian member accredited to the International Organisation of Legal Metrology. The Commission is directed by a board of five part-time Commissioners.

The *National Association of Testing Authorities* (NATA) organises testing facilities throughout Australia to serve private and governmental needs. Membership is open to authorities whose testing laboratories conform to the standards of staffing and operations defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of acoustic and vibration measurement, biological testing, chemical testing, electrical testing, heat and temperature measurement, mechanical testing, metrology, non-destructive testing and optics and photometry.

The *Industrial Design Council of Australia* (IDCA) is engaged in activities aimed at encouraging better design in Australian-made goods and fostering a wider appreciation of good design throughout the community. The Council is representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and commerce, and by Commonwealth and State Government grants.

The Council's Field Advisory Service has a diagnostic and counselling role, assisting smaller manufacturers throughout Australia with product development policy and direction. Field advisers are based in IDCA State offices in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

The Australian Design Award is granted for high-quality products of Australian design and manufacture. An index of these products is held in each State office. These products are also displayed in Australian Design Centres.

Regular contact is maintained with senior executives of manufacturing companies, departmental officers and designers through the Design Delegate program of lectures. Inquirers seeking professional design services are referred to qualified industrial designers. The Council is also concerned with raising the standard of training in industrial design in co-operation with education authorities.

The Council's National Secretariat is in Melbourne.

The *Australian Standard Commodity Classification* (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in manufacturing industries. The second edition, which relates to the year 1977 78 was extended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries. The latest edition published is in respect of the year 1980 81 which was released in April 1983. Because of the relatively few changes that occurred in the component items of the ASCC, it was decided not to publish the 1979 80 edition of the ASCC manual.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

The *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0) was developed by the ABS as part of its program for the integration of economic statistics. Since its introduction by the ABS in the processing of the 1969 Integrated Economic Censuses, the ASIC has gained a wide acceptance by users of statistics outside the ABS and has been progressively applied in most ABS collections and compilations where data are classified by industry.

The ASIC has been devised for the purpose of classifying statistical units by industry. It has been designed primarily as a system for the classification of establishments (e.g. individual mines, factories, shops, etc.) although it may also be used for classifying other economic units such as enterprises.

The fundamental concept of this classification system is that an industry (i.e. an individual class, group, etc.) in the ASIC is composed of establishments that have been classified to it. Each industry class is defined in terms of the predominant activities of the establishment classified to it and these activities are specified in the ASIC as *primary activities* of the individual industry classes. These industry definitions are revised only at relatively infrequent intervals so as to minimise the disruption to time series data assembled on an ASIC basis.

As a result of a recent comprehensive review of the classification, the 1978 Edition of ASIC has been published. This revised edition is being progressively introduced in all relevant ABS collections.

Productivity action

For information about the Productivity Group Movement and Productivity Promotion Council of Australia *see* Chapter 25, Science and Technology.

Manufacturing industry statistics

Manufacturing industry statistics from 1901 to 1967–68

A series of substantially uniform statistics exist from 1901 up until 1967-68 when the framework within which manufacturing statistics were collected was changed. Detailed manufacturing statistics in respect of this period are included in Year Book No. 57, pages 721-9, and in earlier issues.

Manufacturing industry statistics from 1968–69

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade, Wholesale Trade, Construction and Electricity and Gas industries. As a result, manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing, but the data supplied for it now cover (with a few exceptions) all activities at the location. The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment.

Census units are classified to industry according to the Australian Standard Industrial Classification (ASIC), described in the ABS publication *Australian Standard Industrial Classification* (1201.0 and 1202.0). The ASIC defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years.

In the 1967-68 census there were approximately 62,600 manufacturing establishments (excluding electricity and gas establishments) with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 would have been included in the 1967-68 census if ASIC had been used.

MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA, 1968–69 to 1981–82

Census year	Establishments at 30 June	Average employment over whole year (a)			Wages and salaries (b)	Turnover	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
		Males	Females	Persons			Opening	Closing			
	No.	No.	No.	No.	$m	$m	$m	$m	$m	$m	$m
1968 69 . . .	35,939	927,211	334,066	1,261,277	3,908.1	18,646.5	3,102.5	3,319.6	11,514.9	7,348.8	903.0
1969 70 . . .	35,674	950,055	345,578	1,295,633	4,328.7	20,687.6	3,322.8	3,634.7	12,862.3	8,137.1	1,030.7
1970 71 . . .			No manufacturing census was conducted in respect of this year.								
1971 72 . . .	36,206	953,967	347,672	1,301,639	5,250.0	23,620.4	3,920.1	4,182.5	14,374.8	9,508.1	1,297.8
1972 73 . . .	36,437	951,610	345,485	1,297,095	5,820.0	26,352.4	4,187.2	4,306.3	15,963.0	10,508.5	1,244.4
1973 74 . . .	37,143	969,338	369,041	1,338,379	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3	1,215.5
1974 75(c) . .	36,836	931,367	333,440	1,264,807	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7	1,456.4
1974 75(d) . .	26,973	916,896	328,341	1,245,237	8,533.5	35,133.7	5,241.0	6,542.7	21,522.3	14,913.1	1,445.9
1975 76 . . .	27,507	888,523	311,917	1,200,440	9,472.4	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8	1,451.7
1976 77 . . .	26,780	876,111	299,720	1,175,831	10,535.8	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1	1,548.0
1977 78(e) . .	25,998	855,448	290,237	1,145,685	11,151.4	48,210.8	7,880.2	8,510.8	29,066.5	19,739.8	1,871.8
1977 78(f) . .	26,065	853,966	290,233	1,144,199	11,135.8	48,112.6	7,863.5	8,498.1	28,979.3	19,738.1	1,877.3
1978 79 . . .	26,312	852,982	290,909	1,143,891	11,966.4	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1	2,262.8
1979 80 . . .	27,430	862,368	291,816	1,154,184	13,357.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0	2,186.7
1980 81 . . .	27,681	859,092	290,746	1,149,838	14,911.4	73,711.8	11,064.3	12,409.7	46,526.1	28,531.1	2,882.7
1981 82 . . .	28,706	862,395	292,264	1,154,659	17,001.0	81,861.5	12,377.3	13,314.9	51,421.3	31,377.7	4,084.2

(*a*) Including working proprietors. (*b*) Excluding the drawings of working proprietors. (*c*) These data and that of previous years includes the data of all manufacturing establishments. (*d*) These data and those of following years exclude single establishment manufacturing enterprises with fewer than four persons employed. (*e*) These data and those of previous years are classified to the 1969 (preliminary) edition of ASIC. (*f*) These data and those of following years are classified to the 1978 edition of ASIC.

The items of data on the census forms were standardised for all census sectors, which has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different.

Even though the concept of 'value added' is similar to 'value of production', direct comparison of 1968–69 and previous figures is not possible because of the change in census units already mentioned which has resulted in the 'value added' for the whole establishment being reported, not merely the 'value added' for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC. In addition, 'value added' as calculated for the Manufacturing Census differs from the concept used in the National Accounts where the concept of 'value added' also excludes some administrative expenses and sundry charges and the change in stocks component is measured by valuing the physical change in stocks at current prices. It is not practicable in the Manufacturing Census to collect data fully in accord with the National Accounts concept of 'value added'.

For a more detailed description of the Integrated Economic Censuses reference should be made to Year Book No. 56, Chapter 31.

Since the introduction of the system of integrated economic censuses the comparability of manufacturing census data has been affected by two additional changes to collection practices:

(i) Commencing with the 1975–76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) is collected from single establishment manufacturing enterprises with less than four persons employed. This procedure significantly reduced both the statistical reporting obligations of small businesses and the collecting and processing costs of the Australian Bureau of Statistics without affecting the reliability of information for the evaluation of trends in the manufacturing sector of the economy (as these small enterprises contribute only marginally to statistical aggregates). In order to provide a link with past and future years, 1974–75 data was processed on both bases.

(ii) Commencing with the 1977–78 census the classification of census units to industry is based on the 1978 edition of the ASIC which replaces the 1969 preliminary edition in use since the 1968–69 census. In general the impact of the change in industrial classification is minimal at the ASIC Division and Subdivision levels.

Multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed

Main structural aggregates relating to number of establishments, employment, wages and salaries, turnover, purchases, transfers in and selected expenses, stocks, and value added are shown in the following tables. Further detailed statistics are contained in the following ABS statistical publications: *Manufacturing Establishments, Details of Operations by Industry Class, Australia* (8203.0), *Manufacturing Establishments, Summary of Operations by Industry Class, Australia* (8202.0) and *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size, Australia* (8204.0).

Summary of operations

The following table shows the summary of operations for manufacturing establishments.

MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY SUB-DIVISION: AUSTRALIA 1980–81 AND 1981–82

Industry sub-division		*Establishments operating at 30 June*	*Average employment over whole year (a)*			*Wages and salaries (b)*	*Turnover*	*Stocks at 30 June*		*Purchases, transfers in and selected expenses*	*Value added*	*Fixed capital expenditure less disposals*
ASIC code	*Description*	*No.*	*Males No.*	*Females No.*	*Persons No.*	*$m*	*$m*	*Opening $m*	*Closing $m*	*$m*	*$m*	*$m*
					1980 81							
21	Food, beverages and tobacco	3,415	132,614	51,078	183,692	2,362	16,129	1,697	1,935	11,343	5,024	497
23	Textiles	634	21,399	15,524	36,923	448	2,015	372	373	1,247	769	38
24	Clothing and footwear	1,999	18,178	60,272	78,450	765	2,710	437	473	1,480	1,267	30
25	Wood, wood products and furniture	4,075	66,908	11,927	78,835	853	3,675	454	515	2,126	1,609	92
26	Paper, paper products, printing and publishing	2,816	73,274	29,136	102,410	1,404	5,255	612	704	2,779	2,568	204
27	Chemical, petroleum and coal products	904	44,404	15,267	59,671	933	7,068	1,132	1,302	4,725	2,513	302
28	Non-metallic mineral products	1,698	40,759	5,096	45,855	673	3,304	414	434	1,872	1,452	199
29	Basic metal products	529	89,455	7,027	96,482	1,561	9,750	1,637	1,977	6,910	3,180	946
31	Fabricated metal products	4,272	92,714	20,336	113,050	1,395	5,853	870	969	3,450	2,502	138
32	Transport equipment	1,404	113,438	14,999	128,437	1,675	6,412	1,272	1,295	3,880	2,555	155
33	Other machinery and equipment	3,767	122,699	38,693	161,392	2,058	7,954	1,632	1,849	4,564	3,607	178
34	Miscellaneous manufacturing	2,168	43,250	21,391	64,641	786	3,585	536	583	2,148	1,484	105
	Total manufacturing	**27,681**	**859,092**	**290,746**	**1,149,838**	**14,911**	**73,712**	**11,064**	**12,410**	**46,526**	**28,531**	**2,883**
					1981 82							
21	Food, beverages and tobacco	3,485	127,921	50,811	178,732	2,606	17,118	1,919	1,947	11,821	5,325	549
23	Textiles	655	20,863	15,082	35,945	500	2,181	374	410	1,361	856	72
24	Clothing and footwear	2,032	18,015	59,492	77,507	849	2,915	460	506	1,580	1,380	34
25	Wood, wood products and furniture	4,184	68,008	12,411	80,419	968	4,102	527	585	2,391	1,770	94
26	Paper, paper products, printing and publishing	2,946	73,071	29,842	102,913	1,591	6,118	697	792	3,228	2,984	293
27	Chemical, petroleum and coal products	942	44,820	15,398	60,218	1,069	7,836	1,256	1,332	5,146	2,767	310
28	Non-metallic mineral products	1,777	40,886	5,071	45,957	768	3,820	438	514	2,210	1,685	179
29	Basic metal products	548	88,779	7,335	96,114	1,784	10,158	2,009	2,073	7,141	3,080	1,687
31	Fabricated metal products	4,509	95,725	20,607	116,332	1,625	6,781	975	1,074	4,021	2,860	167
32	Transport equipment	1,394	115,563	15,904	131,467	1,961	7,631	1,270	1,389	4,752	2,998	329
33	Other machinery and equipment	3,934	123,902	39,028	162,930	2,358	9,192	1,862	2,061	5,331	4,059	246
34	Miscellaneous manufacturing	2,300	44,842	21,283	66,125	922	4,009	590	632	2,437	1,614	125
	Total manufacturing	**28,706**	**862,395**	**292,264**	**1,154,659**	**17,001**	**81,861**	**12,377**	**13,315**	**51,421**	**31,378**	**4,084**

(*a*) Includes working proprietors. (*b*) Excludes the drawings of working proprietors.

Employment

The statistics on the number of persons employed shown in the following table relate to the average whole year employment, including working proprietors and those persons working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED BY INDUSTRY SUB-DIVISION, 1981–82, AND TOTAL MANUFACTURING 1979–80 TO 1981–82

Industry sub-division *ASIC code*	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
	MALES EMPLOYED									
21	Food, beverages and tobacco	39,451	37,859	25,814	11,966	8,140	3,751	479	461	127,921
23	Textiles	5,767	11,555	661	1,514	495	871	—	—	20,863
24	Clothing and footwear	5,136	10,722	664	1,120	281	81	7	4	18,015
25	Wood, wood products and furniture	22,766	16,756	11,109	6,593	6,910	3,350	102	422	68,008
26	Paper, paper products, printing and publishing	26,104	23,733	7,244	5,613	4,524	4,723	205	925	73,071
27	Chemical, petroleum and coal products	20,244	15,568	2,845	2,397	2,845	921	—	—	44,820
28	Non-metallic mineral products	14,773	10,703	6,582	3,029	4,667	780	859	207	40,888
29	Basic metal products	50,880	13,241	6,279	8,397	5,746	3,524			88,779
31	Fabricated metal products	34,556	29,822	12,811	6,955	9,409	1,544	198	430	95,725
32	Transport equipment	31,294	49,793	12,194	16,536	5,073	591	45	37	115,563
33	Other machinery and equipment	52,479	40,312	9,843	12,944	7,313	845	37	129	123,902
34	Miscellaneous manufacturing	15,877	18,844	3,383	4,338	1,992	364	30	12	44,840
	Total manufacturing									
	1981–82	**319,327**	**278,908**	**99,429**	**81,402**	**57,395**	**21,345**	**1,962**	**2,627**	**862,395**
	1980–81	323,117	277,744	94,319	81,449	55,874	21,942	2,117	2,530	859,092
	1979–80	323,871	281,959	93,636	83,498	53,461	21,520	2,015	2,408	862,368
	FEMALES EMPLOYED									
21	Food, beverages and tobacco	16,820	15,280	7,622	5,151	3,886	1,714	177	161	50,811
23	Textiles	4,550	7,592	544	1,165	305	926	—	—	15,082
24	Clothing and footwear	18,981	32,825	3,138	3,086	1,295	127	22	18	59,492
25	Wood, wood products and furniture	4,371	3,302	2,013	1,148	1,293	208	15	61	12,411
26	Paper, paper products, printing and publishing	12,493	9,106	2,892	2,102	2,041	697	122	389	29,842
27	Chemical, petroleum and coal products	9,341	4,681	472	449	401	54	—	—	15,398
28	Non-metallic mineral products	1,972	1,779	452	323	446	54	137	30	5,071
29	Basic metal products	3,998	1,599	372	694	429	121			7,335
31	Fabricated metal products	8,353	6,810	2,282	1,526	1,272	229	37	98	20,607
32	Transport equipment	3,396	9,773	652	1,635	270	170	4	4	15,904
33	Other machinery and equipment	19,403	12,692	1,446	4,243	1,092	94	8	50	39,028
34	Miscellaneous manufacturing	8,778	8,390	1,403	1,950	674	70	5	13	21,283
	Total manufacturing									
	1981–82	**112,456**	**113,829**	**23,288**	**23,472**	**13,404**	**4,464**	**527**	**824**	**292,264**
	1980–81	112,997	113,745	21,796	23,306	12,996	4,586	534	786	290,746
	1979-80	112,562	115,354	21,970	23,545	12,526	4,638	497	724	291,816
	PERSONS EMPLOYED									
21	Food, beverages and tobacco	56,271	53,139	33,436	17,117	12,026	5,465	656	622	178,732
23	Textiles	10,317	19,147	1,205	2,679	800	1,797	—	—	35,945
24	Clothing and footwear	24,117	43,547	3,802	4,206	1,576	208	29	22	77,507
25	Wood, wood products and furniture	27,137	20,058	13,122	7,741	8,203	3,558	117	483	80,419
26	Paper, paper products, printing and publishing	38,597	32,839	10,136	7,715	6,565	5,420	327	1,314	102,913
27	Chemical, petroleum and coal products	29,585	20,249	3,317	2,846	3,246	975	—	—	60,218
28	Non-metallic mineral products	16,745	12,482	7,034	3,352	5,113	834	994	237	45,957
29	Basic metal products	54,878	14,840	6,651	9,091	6,175	3,645			96,114
31	Fabricated metal products	42,909	36,632	15,093	8,481	10,681	1,773	235	528	116,332
32	Transport equipment	34,690	59,566	12,846	18,171	5,343	761	49	41	131,467
33	Other machinery and equipment	71,882	53,004	11,289	17,187	8,405	939	45	179	162,930
34	Miscellaneous manufacturing	24,655	27,234	4,786	6,288	2,666	434	37	25	66,125
	Total manufacturing									
	1981–82	**431,783**	**392,737**	**122,717**	**104,874**	**70,799**	**25,809**	**2,489**	**3,451**	**1,154,659**
	1980–81	436,114	391,489	116,115	104,755	68,870	26,528	2,651	3,316	1,149,838
	1979–80	436,433	397,313	115,606	107,043	65,987	26,158	2,512	3,132	1,154,184

Wages and salaries

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY SUB-DIVISION, 1981–82 AND TOTAL MANUFACTURING 1979–80 TO 1981–82

($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	865	797	474	223	160	68	10	8	2,606
23	Textiles	150	270	15	34	10	21	–	–	500
24	Clothing and footwear	260	491	37	44	15	2	–	–	849
25	Wood, wood products and furniture	346	239	147	93	90	45	1	7	968
26	Paper, paper products, printing and publishing	614	521	143	104	95	90	5	19	1,591
27	Chemical, petroleum and coal products	526	356	60	49	60	18	–	–	1,069
28	Non-metallic mineral products	290	215	113	51	78	13	21	4	768
29	Basic metal products	1,040	267	119	157	120	62			1,784
31	Fabricated metal products	620	515	198	107	153	22	3	8	1,625
32	Transport equipment	518	911	179	268	74	11	1	–	1,961
33	Other machinery and equipment	1,048	779	159	232	124	13	1	2	2,358
34	Miscellaneous manufacturing	346	395	57	84	33	5	–	–	922
	Total manufacturing									
	1981–82	**6,623**	**5,757**	**1,700**	**1,446**	**1,013**	**370**	**42**	**49**	**17,001**
	1980 81	5,884	5,032	1,410	1,283	869	347	42	45	14,911
	1979 80	5,253	4,563	1,253	1,186	734	298	33	37	13,358

Turnover

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise; bounties and subsidies on production; plus all other operating revenue from outside the enterprise, (such as commission, repair and service revenue and rent, leasing and hiring revenue), plus capital work done for own use, or for rental or lease. Receipts from interest, royalties, dividends, and the sale of fixed tangible assets are excluded.

MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY SUB-DIVISION, 1981–82 AND TOTAL MANUFACTURING 1979–80 TO 1981–82

($ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	5,115	5,452	3,373	1,407	1,153	508	64	45	17,118
23	Textiles	720	1,107	77	163	45	69	–	–	2,181
24	Clothing and footwear	975	1,647	102	147	36	7	–	1	2,915
25	Wood, wood products and furniture	1,452	1,016	586	405	375	229	5	34	4,102
26	Paper, paper products, printing and publishing	2,375	2,066	518	400	301	396	14	50	6,118
27	Chemical, petroleum and coal products	3,277	2,365	1,359	282	452	101	–	–	7,836
28	Non-metallic mineral products	1,390	902	713	292	392	79	185	27	3,820
29	Basic metal products	4,746	1,809	1,081	779	1,260	322			10,158
31	Fabricated metal products	2,535	2,043	980	455	638	90	21	19	6,781
32	Transport equipment	1,565	3,825	897	1,095	203	40	3	2	7,631
33	Other machinery and equipment	3,957	3,196	613	903	477	35	2	10	9,192
34	Miscellaneous manufacturing	1,432	1,780	290	324	160	22	2	1	4,009
	Total manufacturing									
	1981–82	**29,538**	**27,208**	**10,590**	**6,651**	**5,491**	**1,898**	**297**	**188**	**81,861**
	1980 81	26,898	23,856	9,667	6,067	4,902	1,867	292	163	73,712
	1979 80	24,109	21,233	8,304	5,415	4,259	1,656	251	127	65,355

Purchases, transfers in and selected expenses

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuels, power, containers, etc. and goods for resale, plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses, sales commission payments and rent, leasing and hiring expenses.

MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION, 1981–82 AND TOTAL MANUFACTURING 1979–80 TO 1981–82

(\$ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	3,437	3,801	2,388	924	832	362	44	33	11,821
23	Textiles	444	682	57	110	27	39	–	–	1,361
24	Clothing and footwear	565	878	46	70	16	4	–	–	1,580
25	Wood, wood products and furniture	847	584	336	250	208	142	3	20	2,391
26	Paper, paper products, printing and publishing	1,241	1,106	263	208	154	229	5	23	3,228
27	Chemical, petroleum and coal products	1,972	1,468	1,154	178	310	64	–	–	5,146
28	Non-metallic mineral products	838	482	419	163	224	49	158	20	2,210
29	Basic metal products	3,195	1,319	865	524	852	244			7,141
31	Fabricated metal products	1,489	1,161	635	270	390	54	16	8	4,021
32	Transport equipment	746	2,614	604	657	105	22	2	1	4,752
33	Other machinery and equipment	2,286	1,824	373	539	286	16	1	6	5,331
34	Miscellaneous manufacturing	851	1,112	175	190	96	12	1	–	2,437
	Total manufacturing									
	1981–82	**17,910**	**17,031**	**7,316**	**4,084**	**3,501**	**1,237**	**231**	**112**	**51,421**
	1980–81	16,653	14,814	6,722	3,693	3,149	1,176	231	89	46,526
	1979–80	15,071	13,353	5,777	3,426	2,663	1,046	179	64	41,580

Stocks

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS BY INDUSTRY SUB-DIVISION, 1981–82 AND TOTAL MANUFACTURING 1979–80 TO 1981–82

(\$ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
	OPENING STOCKS AT 30 JUNE									
21	Food, beverages and tobacco	659	641	201	273	84	53	6	1	1,919
23	Textiles	123	186	14	25	8	18	–	–	374
24	Clothing and footwear	147	265	16	28	3	1	–	–	460
25	Wood, wood products and furniture	180	127	66	51	59	41	1	3	527
26	Paper, paper products, printing and publishing	260	263	48	45	27	49	1	5	697
27	Chemical, petroleum and coal products	609	369	152	43	59	24	–	–	1,256
28	Non-metallic mineral products	180	104	53	33	55	10	70	3	438
29	Basic metal products	990	263	228	195	193	71			2,009
31	Fabricated metal products	386	330	112	58	67	15	4	2	975
32	Transport equipment	305	640	134	159	23	8	–	–	1,270
33	Other machinery and equipment	798	742	96	146	74	6	–	1	1,862
34	Miscellaneous manufacturing	216	270	35	45	21	3	–	–	590
	Total manufacturing									
	1981–82	**4,854**	**4,200**	**1,154**	**1,101**	**673**	**298**	**83**	**14**	**12,377**
	1980–81	4,235	3,809	1,024	1,091	563	280	49	13	11,064
	1979–80	3,538	3,216	871	866	508	233	45	11	9,288
	CLOSING STOCKS AT 30 JUNE									
21	Food, beverages and tobacco	620	655	232	276	95	61	7	1	1,947
23	Textiles	137	206	14	28	6	18	–	–	410
24	Clothing and footwear	157	295	16	32	4	1	–	–	506
25	Wood, wood products and furniture	202	143	74	52	61	49	1	3	585
26	Paper, paper products, printing and publishing	285	312	58	50	31	46	2	6	792
27	Chemical, petroleum and coal products	636	411	152	47	63	23	–	–	1,332
28	Non-metallic mineral products	203	121	78	37	60	12	64	3	514
29	Basic metal products	982	290	260	183	197	99			2,073
31	Fabricated metal products	404	371	137	61	78	16	4	2	1,074
32	Transport equipment	320	705	151	167	29	17	–	–	1,389
33	Other machinery and equipment	870	799	124	173	89	5	–	1	2,061
34	Miscellaneous manufacturing	234	291	33	48	22	3	–	–	632
	Total manufacturing									
	1981–82	**5,051**	**4,601**	**1,328**	**1,154**	**736**	**350**	**78**	**17**	**13,315**
	1980–81	4,855	4,207	1,154	1,104	686	302	83	17	12,410
	1979–80	4,246	3,840	1,036	1,110	556	276	50	13	11,126

Value added

The statistics on 'value added' contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving 'value added' is given on page 380.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION, 1981–82 AND TOTAL MANUFACTURING, 1979–80 TO 1981–82
(\$ million)

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	1,639	1,666	1,017	486	331	154	21	12	5,325
23	Textiles	289	445	20	56	15	31	–	–	856
24	Clothing and footwear	420	800	56	80	21	3	–	–	1,380
25	Wood, wood products and furniture	627	447	258	157	170	96	2	15	1,770
26	Paper, paper products, printing and publishing	1,160	1,009	266	197	152	163	9	28	2,984
27	Chemical, petroleum and coal products	1,332	940	205	107	147	36	–	–	2,767
28	Non-metallic mineral products	575	438	318	133	173	32	21	8	1,685
29	Basic metal products	1,544	516	247	243	413	105			3,080
31	Fabricated metal products	1,064	924	371	189	258	38	5	10	2,860
32	Transport equipment	834	1,276	311	446	103	27	1	1	2,998
33	Other machinery and equipment	1,743	1,429	268	392	205	18	1	4	4,059
34	Miscellaneous manufacturing	599	690	113	137	65	10	1	–	1,614
	Total manufacturing									
	1981–82	**11,825**	**10,578**	**3,448**	**2,620**	**2,053**	**713**	**61**	**78**	**31,378**
	1980 81	10,865	9,440	3 075	2,387	1,877	713	96	77	28,531
	1979 80	9,745	8,505	2,692	2,233	1,643	654	77	64	25,614

Number of establishments

The following table shows the number of establishments in each State in operation at 30 June for the years indicated. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION AT 30 JUNE 1982 BY INDUSTRY SUB-DIVISION, AND TOTAL MANUFACTURING 1979–80 TO 1981–82

Industry sub-division										
ASIC code	*Description*	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
21	Food, beverages and tobacco	1,010	1,000	590	374	366	113	20	12	3,485
23	Textiles	210	325	43	36	31	10	–	–	655
24	Clothing and footwear	754	1,011	102	90	64	5	3	3	2,032
25	Wood, wood products and furniture	1,435	1,130	653	312	468	143	14	29	4,184
26	Paper, paper products, printing and publishing	1,262	916	266	202	207	49	12	32	2,946
27	Chemical, petroleum and coal products	438	293	65	52	78	16	–	–	942
28	Non-metallic mineral products	591	406	342	134	228	46	16	14	1,777
29	Basic metal products	215	181	59	37	40	10	4	2	548
31	Fabricated metal products	1,762	1,197	625	352	462	77	19	15	4,509
32	Transport equipment	447	413	221	118	166	21	4	4	1,394
33	Other machinery and equipment	1,641	1,259	340	327	311	39	6	11	3,934
34	Miscellaneous manufacturing	860	785	250	185	182	26	8	4	2,300
	Total manufacturing									
	1981–82	**10,625**	**8,916**	**3,556**	**2,219**	**2,603**	**555**	**106**	**126**	**28,706**
	1980 81	10,334	8,726	3,291	2,131	2,426	558	98	117	27,681
	1979 80	10,158	8,902	3,170	2,143	2,301	543	101	112	27,430

Single establishment manufacturing enterprises with less than four persons employed

Summary of operations

The following table shows the summary of operations for single establishment manufacturing enterprises with less than four persons employed.

SINGLE ESTABLISHMENT MANUFACTURING ENTERPRISES WITH LESS THAN FOUR PERSONS EMPLOYED: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION, AUSTRALIA, 1981–82 AND TOTAL MANUFACTURING 1979–80 TO 1981–82

Industry sub-division						
ASIC code	*Description*	*Establishments operating at 30 June*	*Employment at 30 June (a)*			*Wages and salaries (b)*
			Males	*Females*	*Persons*	
			— No.			$m
21	Food, beverages and tobacco	850	1,278	674	1,952	7.9
23	Textiles	252	320	207	527	2.1
24	Clothing and footwear	624	559	722	1,281	5.9
25	Wood, wood products and furniture	3,371	5,419	1,336	6,755	25.4
26	Paper, paper products, printing and publishing	1,390	1,847	1,026	2,873	16.0
27	Chemical, petroleum and coal products	253	345	161	506	3.2
28	Non-metallic mineral products	536	831	272	1,103	4.8
29	Basic metal products	121	193	36	229	1.2
31	Fabricated metal products	2,320	3,769	1,039	4,808	25.8
32	Transport equipment	753	1,241	303	1,544	7.7
33	Other machinery and equipment	1,877	2,811	956	3,767	23.6
34	Miscellaneous manufacturing	1,677	2,343	998	3,341	13.9
	Total manufacturing . . . **1981–82**	**14,024**	**20,956**	**7,730**	**28,686**	**137.3**
	1980 81	12,275	18,405	6,516	24,921	98.6
	1979 80	12,720	19,367	6,650	26,017	92.0

(*a*) Includes working proprietors. (*b*) Excludes the drawings of working proprietors.

Principal manufacturing commodities

The factory production of certain commodities is shown in the monthly publications of the ABS, and in the annual publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is contained in the annual publication, *Manufacturing Commodities, Principal Articles Produced, Australia* (8303.0).

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in the ABS publication 8303.0 mentioned above.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA

Commodity code	*Article*	*Unit of quantity*	*1979–80*	*1980–81*	*1981–82p*
	Acid (in terms of 100%)—				
401.29	Hydrochloric	tonnes	58,672	59,909	54,554
401.37	Nitric	"	166,647	168,868	n.p.
401.57	Sulphuric	'000 tonnes	2,153	1,976	2,039
171.03, 04, 07, 08	Aerated and carbonated waters	'000 litres	935,732	1,031,259	1,007,288
	Air-conditioning equipment—				
657.03, 05	Room air conditioners (refrigerated)	No.	60,107	58,428	n.p.
657.13, 15	Room air coolers (evaporative coolers)	"	89,691	117,623	n.p.
657.21, 22, 23	Packaged unit air conditioners	"	30,448	30,629	n.p.
	Animal feeds—				
	From wheat—				
152.06	Pollard	'000 tonnes	216	230	229
159.11	Poultry pellets and crumbles	"	1,455	1,425	1,346
159.15	Poultry mash	"	163	149	187
159.01	Canned dog and cat foods	'000 kg	199,578	194,602	174,079
159.02	Dog biscuits (whole)	"	5,839	5,649	11,773
159.03	Other manufactured dog and cat food	"	92,427	108,892	104,611
	Bags, leather, fibre, etc.—				
	Handbags—				
864.31	Leather	'000	220	295	325
864.33	Plastic	"	335	257	269
864.39	Other	"	481	483	483
864.11–19	Suitcases, kitbags and trunks	'000	766	684	385
	Bath heaters—				
652.01	Electric	No.	5,295	4,303	4,137
652.03, 06, 08	Gas	"	n.p.	90	n.p.
652.05	Solid fuel	"	115		
779.02–37	Bathing suits(*a*)	'000 doz	n.p.	n.p.	528
	Baths (exclude infants' baths)—				
671.03	Pressed steel—Enamelled	'000	150	157	142
671.01, 04, 08	Other (exclude pressed steel, galvanised)	"	26	32	37
	Batteries, wet cell type—				
685.13, 15	Auto (S.L.I.) 6 volts	"	263	231	202
685.17, 19	Auto (S.L.I.) 12 volts	"	2,788	2,479	2,559
685.33, 35	Radio, homelighter, fencer	No. of 2 volt cells	18,408	11,072	19,930
685.43–65	Traction, plant and other	"	206,291	170,138	197,365
172.02, 04, 06	Beer (excluding waste beer)	mil. litres	2,023	1,987	1,968
064.21	Biscuits	'000 kg	124,055	129,748	131,628
372.52–66, 374.51–57	Blankets, Woollen—Pure and Mixtures	'000	972	857	961
152.02	Bran (wheaten)	'000 tonnes	89	95	90
172.21	Brandy	'000 litre al	1,921	2,410	2,858
777.41, 49	Brassieres	'000 doz	666	681	654
066.01–31	Breakfast food, cereal (ready to eat)	tonnes	77,333	81,504	85,992
472.01, 03	Bricks, clay	million	2,172	2,287	2,234
261.41	Briquettes, brown coal	'000 tonnes	1,230	1,081	993
051.30, 052.20	Butter—from cream (exclude whey cream)	'000 kg	81,733	84,077	74,983
773.51, 53, 74, 75, 83	**Cardigans**, jumpers, etc.	'000 doz	2,030	1,908	1,765
474.02	Cement, Portland	'000 tonnes	5,201	5,656	6,136
053.45	Cheese (non-processed)	'000kg	154,219	136,744	153,210
	Cloth (including mixtures)—				
373.10–52	Cotton(*b*)	'000m²	43,189	42,761	39,123
	Rayon and acetate—				
374.02, 06, 14	Pure	"	13,612	12,237	n.p.
374.20–35	Synthetic (non-cellulosic)	"	121,423	124,509	122,807
372.02–50	Wool (excluding blanketing and rug)	"	9,128	10,351	8,488
435.22	Coke—Metallurgical	'000 tonnes	4,367	4,690	n.p.
475.90	Concrete, ready mixed	'000m³	11,412	12,273	13,596
	Confectionery—				
104.02–18	Chocolate	'000 kg	53,192	58,019	65,331
104.21–29	Other	"	53,609	56,324	60,071
452.04	Copper, refined(*c*)	'000 tonnes	137	159	163

(*a*) Includes swim shorts. Excludes infants' and babies' swim-wear. (*b*) Excludes tyre-cord fabric and towelling. (*c*) Primary origin only.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1979–80*	*1980–81*	*1981–82p*
171.06, 10	Cordials and syrups	'000 litres	115,736	121,993	130,859
777.01–29	Corsets and corselets	doz	128,985	133,605	146,367
611.01	Cycles (complete)	'000	263	211	145
804.01	**Dentifrices** (toothpaste)	'000 kg	7,057	6,700	7,080
499.42	**Electricity**	mil. kWh	95,910	100,782	105,034
523.76–78	Electrodes for manual welding	'000 kg	21,727	21,432	23,464
502.22–39	Engines, spark and compression ignition(*a*)	'000	236	n.p.	n.p.
	Essences, flavouring—				
139.31	Domestic	'000 litres	724	655	628
139.35	Industrial	"	6,321	6,987	6,525
696.01, 03, 05	**Fans**, electric (propellor type)	No.	521,614	658,717	598,217
	Floorboards—				
332.06	Australian timber	m³	207,816	181,627	202,506
332.08	Imported timber	"	1,532	1,698	2,277
	Floor coverings—				
841.01–07	Textile	'000 m²	30,582	31,956	34,531
841.31–61, 69	Smooth surface and embossed	"	5,463	n.p.	n.p.
841.67, 68	Timber parquetry	"	146	184	206
841.85	Underfelts, underlays, etc.(*b*)	"	7,745	7,728	7,584
692.21, 23	Floor polishers, electric	No.	8,146	6,989	n.p.
	Flour—				
068.01	Self-raising	'000 kg	27,507	25,587	17,601
062.01, 10, 32	Wheaten(*c*)	'000 tonnes	1,085	1,110	n.p.
	Fruit juices, natural—				
074.61–69, 79	Single strength	'000 litres	208,412	232,612	187,268
074.76, 89	Concentrated(*d*)	"	22,225	30,272	25,002
781.06–29	**Gloves**, work(*e*)	'000 doz pairs	3,994	3,254	n.p.
127.21	Glucose	'000 kg	50,140	50,738	52,052
832.58, 59	Golf clubs	doz	26,038	35,383	28,469
	Heaters, room—				
651.01, 03	Solid fuel	No.	7,426	n.p.	n.p.
651.11–20	Electric radiators and fires	'000	606	694	605
651.04, 05, 21, 22, 26, 27	Gas fires and space heaters	No.	79,643	n.p.	53,156
775, 776	Hosiery—				
	Women's (including panty hose)	'000 doz pairs	6,627	7,585	6,734
	Men's	"	2,013	2,252	2,128
	Children's and infants'	"	1,325	1,237	1,333
051.56, 58, 59	**Ice cream**(*f*)	'000 litres	213,347	213,879	213,971
051.87, 89, 90	Infants', invalids' and health beverages from cows milk(*g*)	'000 kg	26,924	28,681	29,775
	Iron and steel—				
442.04, 08	Pig iron	'000 tonnes	7,481	7,335	6,606
442.80–83	Steel ingots	"	7,374	7,012	6,198
442.28	Blooms and slabs(*h*)	"	6,526	6,179	5,438
076.60	**Jams** (including conserves, jellies, etc.)	'000 kg	22,522	27,538	32,070
391.04	**Lard**	"	3,773	3,196	3,028
	Lawn mowers—				
699.52, 53	Petrol, rotary	No.	337,051	312,107	311,508
699.41, 45, 55, 61	Other types(*i*)	"	11,007	n.p.	n.p.
453.04	Lead refined(*j*)	'000 tonnes	204	206	207
	Leather—				
	Dressed or finished—				
301.43–65	Chrome tanned (including retanned)	'000 m²	4,457	4,377	3,673
301.31–37, 83–89	Vegetable tanned, by weight	'000 kg	2,426	1,462	n.p.
301.67, 69	Vegetable tanned, by measurement	'000 m²	192	n.p.	n.p.

(*a*) Petrol and diesel. Excludes car, motorcycle, truck, tractor, aero, and marine engines. (*b*) Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes). (*c*) Includes wheatmeal for baking, excludes sharps and other flour. (*d*) Excludes grape must. (*e*) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (*f*) Includes ice cream combined with other confections, including those aerated milk-based confections which contain 10% or more butterfat. (*g*) Includes malted milk and milk sugar (lactose). (*h*) Primary mills output. (*i*) Petrol cylinder, electric and hand. (*j*) Includes lead content of lead alloys from primary sources but excludes lead-silver bullion.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1979–80*	*1980–81*	*1981–82p*
	Lime—				
275.43, 45	Crushed	tonnes	288,688	331,761	n.p.
479.18	Hydrated	'000 tonnes	132	153	167
479.12	Quick	,,	429	390	446
802.21	Lipstick	'000 kg	41	38	38
063.11–21, 31	**Malt** (excluding extract)	'000 tonnes	537	565	558
	Margarine—				
121.01	Table	'000 kg	98,831	99,068	105,282
121.06, 08	Other	,,	41,109	40,938	42,199
	Mattresses—				
844.22, 25, 27	Inner spring	'000	714	703	708
844.42, 45, 47	Rubber	,,	10	10	4
844.52–67	Other	,,	546	523	529
027.02–77	Meat, canned(*a*)	'000 kg	41,402	40,603	34,658
	Meters (domestic)—				
703.11	Water consumption	'000	175	166	176
	Milk, condensed, concentrated and evaporated—				
051.21, 22	Full cream, coffee and milk, sweetened	'000 kg	16,532	17,170	n.p.
051.23, 052.42	Full cream, unsweetened	,,	45,224	46,377	36,686
051.28	Skim	,,	23,586	20,349	19,494
	Milk powder in powdered form—				
051.72, 73	Full cream	,,	80,255	75,225	63,299
051.76–79	Skim	,,	54,155	56,079	76,201
051.81, 82	Buttermilk or mixed skim and buttermilk	,,	6,354	6,888	n.p.
503.13–32	Motors, electric (excl. automotive)	'000	3,742	4,021	3,570
	Motor vehicles, finished—				
581.02–08	Cars	No.	321,997	244,597	285,387
581.10–16	Station wagons	,,	77,291	72,432	88,432
582.04	Utilities	,,	18,795	15,212	24,264
582.06	Panel vans	,,	10,449	9,330	
582.08–24	Trucks and truck-type vehicles	,,	8,603	5,554	
	Motor vehicles, partly finished—				
581.22–28, 582.31, 32	Cars, station wagons, utilities, vans	,,	654	298	n.p.
582.33–46	Trucks and truck-type vehicles	,,	17,315	16,161	15,899
465.16, 17	**Nails**	tonnes	24,953	23,013	n.p.
	Oatmeal and rolled oats—				
062.61, 63	For porridge, etc.	tonnes	19,086	20,916	23,676
	Paints, etc.—				
	Architectural and decorative(*b*)—				
	Solvent thinned—				
410.01	Primers and undercoats	'000 litres	10,982	11,347	9,348
410.03, 05, 07	Finishing coats	,,	28,322	27,640	24,245
	Water thinned—				
410.11, 13, 15	Plastic latex	,,	42,760	46,096	46,767
410.17	Other water based	,,	2,064	2,787	3,066
410.25	Tinting colours (all types) packed for sale or transfer out	,,	616	525	487
	Paper—				
351.11	Newsprint	'000 tonnes	222	214	304
351.18–79	Other	,,	727	764	706
352.11–33	Paperboard (*c*)	,,	483	486	487
336.12	Particle board (resin bonded)	'000 m²	667	686	707
479.22	Plaster of Paris	'000 tonnes	419	443	n.p.
479.32, 33	Plaster sheets—Non-acoustic	'000 m²	54,770	63,617	63,768
334.32, 34, 36, 38	Plywood, 1 mm basis	,,	89,933	93,397(*d*)	90,602(*d*)
	Preserves—				
	Fruit—				
076.01–50	Canned or bottled	'000 kg	228,470	241,870	206,190
074.01	Pulp and puree—single strength	,,	3,109	2,516	1,768
	Vegetables—				
094.02–47	Canned or bottled	,,	134,792	121,311	138,645
092.02, 06, 10, 19	Quick frozen	,,	160,646	168,735	200,925

(*a*) Excludes poultry and baby food. (*b*) Excludes heavy duty coatings. (*c*) Excludes coated container board. (*d*) Excludes case plywood.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1979–80*	*1980–81*	*1981–82p*
	Pyjamas—				
774.27,29	Men's, youths' and boys', woven (suits only)	'000 doz	364	328	269
774.50–59, 64, 66	Women's, maids' and girls' (incl. nightdresses)	"	765	677	680
832.65, 85	**Racquet** frames (all types)	doz.	7,598	7,603	n.p.
647.10–12	Radio receiving sets (including radiograms)	No.	199,017	n.p.	n.p.
	Records (phonograph)—				
647.93	Single play	'000	10,357	11,445	9,927
647.94	Extended play	"	269	152	184
647.95	Long play	"	21,248	22,289	22,329
657.33, 34, 35, 41	Refrigerators, domestic, electric and gas	"	279	286	327
403.02, 18–96, 404	Resins, synthetic and plastics, for all purposes	'000 tonnes	816	808	820
372.70, 72, 374.59	Rugs	'000	141	130	137
123.18–25	**Sauce**	'000 litres	33,796	33,465	33,811
062.04	Semolina	'000 tonnes	37	33	34
773.04–09	Shirts, woven (men's, youths' and boys'), collar attached (*a*)	'000 doz	497	504	n.p.
654.41	Sink heaters, electric	No.	13,352	9,620	8,800
805.01–13	Soap, for personal toilet use(*b*)	tonnes	31,388	32,095	36,141
	Soup—				
	Liquid—				
122.02	Tomato	'000 litres	15,777	n.p.	n.p.
122.09	Other	"	23,560	19,172	n.p.
122.13, 15	Dry-mix	'000 kg	5,742	5,958	5,351
127.11–19	Starch (incl. cornflour)	"	158,521	151,914	172,130
	Stoves, ovens and ranges, domestic cooking—				
661.01–11	Electric(*c*)	No.	234,529	267,012	232,229
662.26, 31, 34, 36, 42, 43	Gas(*d*)	"	100,754	92,781	105,895
662.01, 03	Solid fuel	"	5,771	5,608	2,771
	Sugar—				
102.01	Raw	'000 tonnes	2,997	3,323	3,435
405.36	Sulphate of ammonia	tonnes	199,956	217,902	209,927
415.07, 405.25	Superphosphate(*e*)	'000 tonnes	4,202	3,557	3,464
803.61	**Talcum** powder	'000 kg	4,302	4,838	4,650
	Tallow (including dripping), rendered—				
391.15	Edible	"	76,081	68,278	68,395
391.24	Inedible	"	270,069	248,067	228,561
647.25–28	Television sets (colour)	No.	331,971	357,799	376,958
	Tiles, roofing—				
475.30	Concrete	'000	186,960	189,396	166,841
472.12	Terracotta	"	46,420	49,390	52,025
	Timber—				
	From native logs—				
331.01–07	Hardwood, etc.	'000 m³	3,280	3,407	3,276
331.09–19	Softwood	"			
661.21, 23	Toasters, electric (domestic)	No.	640,569	686,743	711,365
094.51	Tomato juice	'000 litres	8,974	7,805	8,186
094.53	Tomato paste and puree	"	16,828	16,189	17,902
373.58–64	Towels	'000 doz	932	942	944
671.51–59	Toilet cisterns	No.	513,087	541,261	683,299
683.03–11	Transformers, chokes and ballasts, for distribution of power and light, etc.	"	19,565	20,747	22,589
773.90–97, 774.01–18, 36–49, 61–73, 91–97	Underwear (men's, women's, children's)	'000 doz	6,926	n.p.	7,251
692.02,04	**Vacuum** cleaners (domestic)	'000	251	236	175
	Wash basins—				
671.37	Earthenware	"	215	265	275
693.02–18	Washing machines, household, electric	"	372	n.p.	n.p.

(*a*) Business or formal. (*b*) Excludes powdered shampoo. (*c*) Includes wall ovens but excludes cooking tops and portable units. (*d*) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (*e*) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22% P_2O_5 equivalent.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA—*continued*

Commodity code	*Article*	*Unit of quantity*	*1979–80*	*1980–81*	*1981–82p*
	Weatherboards—				
332.12	Australian timber	m³	18,076	13,240	17,921
332.14	Imported timber	"	3,375	1,747	3,392
152.14	Wheatmeal for stock feed	'000 tonnes	342	482	544
519.01	Wheelbarrows (metal)	No.	200,453	176,409	206,949
	Wine, beverage—				
172.42	Fortified	'000 litres	57,619	53,620	54,235
172.46	Unfortified	"	261,504	246,596	253,029
341.31-45	Wood pulp (air dried)	'000 tonnes	688	706	669
242.07-11	Wool, scoured or carbonised	tonnes	89,335	90,253	81,786
242.33, 35	Wool tops, pure	'000 kg	19,887	19,880	21,351
	Yarn (including mixtures)—				
364.11-50	Cotton	"	21,837	21,696	22,004
363.47-75	Woollen	"	14,620	19,440	19,919
363.17-31	Wool worsted	"	5,227		
365.90, 366.03, 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun	"	9,880	10,939	8,340
457.04	**Zinc**, refined(*a*)	'000 tonnes	300	274	301

(*a*) Primary origin only includes small quantities of zinc dust.

Enterprise Statistics—Integrated Economic Censuses and Surveys

The Integrated Economic Censuses and Surveys conducted by the Australian Bureau of Statistics have, since 1977-78, included *enterprises* primarily engaged in Mining and Manufacturing annually, with Electricity and Gas Production and Distribution collected in 1977–78 and annually from 1979–80, while other economic sectors are approached on a rotating basis. Statistics in respect of enterprises have been published in *Integrated Economic Censuses and Surveys, Enterprise Statistics: Details by Industry Class, Australia* (Cat. No. 8103.0).

Below is a brief summary of the censuses collection units and methodology and a summary table of enterprise statistics. More detailed explanations on the censuses are shown in the above publication.

The business units, as standardised for purposes of the Integrated Economic Censuses and Surveys are at three levels: the establishment (and associated administrative offices and ancillary units); the enterprise; and the enterprise group.

The central unit from which statistical information was collected is the *enterprise*, defined broadly as the unit comprising all operations in Australia of a single operating legal entity. The term *legal entity* is used to cover a sole proprietor, or partnership, or company, but also includes co-operative societies and some government authorities mainly engaged in the industries included in the censuses and surveys.

The group of legal entities owned or controlled by a single company is recognised as a separate type of unit—the *enterprise group*. The basic unit for which most data were collected and tabulated is the *establishment*, defined in general as a unit comprising all the operations carried on by the one enterprise at a single physical location—such as an individual factory, shop or mine.

In the Integrated Economic Censuses and Surveys, information was collected using a common framework of reporting units (enterprises and establishments as defined above) and data concepts and in accordance with a standard industrial classification (the *Australian Standard Industrial Classification*, 1978 Edition). As a result the statistics for the industries covered by the censuses and surveys are provided with no overlapping or gaps in scope, so that aggregates for economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks are obtained on a consistent basis for all industries and business units covered by the censuses and surveys. A detailed description of the integration of economic censuses is contained in Chapter 31, Year Book No. 56, 1970.

ENTERPRISES—SUMMARY OF OPERATIONS BY INDUSTRY, AUSTRALIA

Industry and year	Enterprises operating during year (a)	Persons employed at 30 June (b)	Wages and salaries (c)	Turnover (d)	Purchases and selected expenses (e)	Rent, leasing and hiring expenses (f)	Stocks at (g)		Value added (h)	Fixed capital expenditure less disposals (i)
							30 June	30 June		
	No.	No.	$m	$m	$m	$m	$m	$m	$m	$m
Mining (excluding services to Mining)										
1979-80 . . .	788	75,328	1,291.1	7,967.5	2,574.2	74.1	840.8	968.8	5,447.2	1,149.7
1980-81 . . .	803	78,564	1,590.3	8,831.2	2,995.2	117.2	920.4	1,231.0	6,029.4	1,847.0
Manufacturing										
1979-80 . . .	22,938	1,158,941	13,485.7	65,222.9	39,556.0	777.2	10,071.1	12,143.9	26,962.3	2,376.1
1980-81 . . .	23,091	1,168,374	15,191.0	74,607.1	44,654.9	959.4	12,203.2	13,583.3	30,372.9	3,155.1
Electricity and Gas Production and Distribution										
1979-80 . . .	73	86,975	1,191.5	4,828.3	2,049.5	19.4	325.7	370.5	2,804.2	1,573.7
1980-81 . . .	101	89,393	1,416.4	5,922.4	2,612.7	23.8	362.6	449.0	3,372.3	2,050.8

(a) The number of enterprises in operation for all or any part of the year which were in the scope of the censuses and surveys. (b) Working proprietors and employees, including part-time and casual employees as at 30 June. (c) Wages and salaries paid during the year to employees of the enterprise. Drawings of working proprietors are excluded. (d) Sales of goods, commission revenue, repair and service revenue, rent, leasing and hiring revenue (as from the year 1978-79 inclusive), government bounties and subsidies and all other operating revenue except interest, royalties and dividends. (e) Purchases by the enterprise of goods for manufacture or resale, containers, stores and supplies (except office supplies) and charges for fuels, electricity and water, freight and cartage, vehicle running expenses, sales commission expenses, repair and maintenance expenses, and commission and sub-contract expenses. (f) Amount paid for rent and leasing premises, vehicles and equipment. (g) Stocks of materials, fuels, etc. work in progress and finished goods owned by the enterprise. (h) This is derived as turnover plus increase (less decrease) in stocks, less purchases and selected expenses, and from 1978-79 inclusive less rent, leasing and hiring expenses. (i) Outlay on new assets (including progress payments) and land and secondhand fixed tangible assets less disposals.

Foreign Ownership and Control in Manufacturing Industry

Summary information on foreign ownership and control in the manufacturing industry is shown in Chapter 24.

INTERNAL TRADE

Wholesale Trade

For summary tables showing final figures from the 1968–69 census of Wholesale Trade *see* Year Book No. 61, pages 1070–2. Further and more detailed statistics are included in separate publications published by Central and State offices of ABS.

Retail Trade

Retail census

The definition of retail trade, for the purpose of the most recent retail census which was taken for the year ended 30 June 1980, is the resale of new and used goods to final consumers for personal and household consumption. For information and detailed tables relating to the 1979–80 Retail Census, reference should be made to the series of final census publications (8622.0 to 8627.0) for 1979–80. Summary of operations of establishments classified by industry group for Australia for 1979–80 are set out in the following table.

Retail surveys

In intercensal periods, estimates of the value of retail sales at current and constant (average 1979–80) prices by broad commodity groups are obtained quarterly by means of sample surveys for each State and Australia.

The following table shows the value of retail sales of goods at current and constant prices in each of the commodity groups specified. The figures have been obtained from a sample based on the 1973–74 Retail Census. A new series based on the 1979–80 Retail Census was commenced in April 1982. More detailed information concerning the quarterly surveys of retail trade is contained in the quarterly publication *Retail Sales of Goods, Australia* (8503.0). Further information on the nature and concepts of constant price estimates is contained in Chapter 4 of *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS(*a*): SUMMARY OF OPERATIONS, BY INDUSTRY GROUP OR CLASS(*b*), 1979-80

ASIC Code(c)	Industry group or class	Establishments at 30 June (No.)	Persons employed at 30 June (No.)(d)	Wages and salaries(e) ($m)	Retail sales ($m)	Turnover ($m)	Stocks		Purchases, transfers in and selected expenses ($m)	Value added ($m)
	Description						Opening ($m)	Closing ($m)		
				RETAIL ESTABLISHMENTS						
481	Department and general stores . . .	857	99,569	717.4	4,010.1	4,253.8	602.7	692.4	3,206.9	1,136.6
484	Clothing, fabrics and furniture stores . .	17,908	81,797	519.1	4,057.5	4,143.4	740.4	851.3	3,140.5	1,113.7
485	Household appliance and hardware stores(*f*)	8,196	43,542	319.7	2,575.9	2,965.6	448.2	517.8	2,252.9	782.3
486	Motor vehicle dealers, petrol and tyre retailers(*g*) . . .	26,516	175,995	1,319.2	12,467.6	18,203.2	1,625.7	1,752.8	15,130.8	3,199.6
488	Food stores	39,416	260,266	1,131.3	12,577.3	12,747.0	635.0	751.5	10,517.0	2,346.5
489	Other retailers . . .	17,607	76,209	406.9	3,251.5	3,385.4	469.1	549.9	2,489.4	976.7
	Total . . .	**110,500**	**737,378**	**4,413.6**	**38,940.0**	**45,698.4**	**4,521.0**	**5,115.6**	**36,737.6**	**9,555.4**
				SELECTED SERVICE ESTABLISHMENTS						
9133	Motion picture theatres	577	6,777	44.9	31.8	177.9	1.3	1.4	76.0	102.0
923	Restaurants, hotels and accommodation . .	17,702	183,310	1,021.6	2,618.3	4,670.2	135.5	160.5	2,617.0	2,078.2
9241,2,3	Licensed clubs(*h*) . .	3,243	52,297	423.1	697.4	1,515.2	48.2	50.1	577.6	939.5
934	Laundries and dry cleaners	1,365	12,106	91.3	1.5	223.5	6.8	8.0	66.7	158.0
935	Hairdressers, beauty salons	2,265	12,282	78.2	12.2	173.3	4.8	5.7	50.7	123.4

(*a*) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than $50,000 (except for ASIC classes 9232 and 9233 in ASIC group 923). For ASIC classes 9232 and 9233 all establishments are included irrespective of turnover size. (*b*) A class total or a total for a combination of classes has been shown where the scope of the census did not include all the ASIC classes in an ASIC group. (*c*) Australian Standard Industrial Classification. (*d*) Includes working proprietors. (*e*) Excludes drawings by working proprietors. (*f*) Includes household appliance and domestic hardware stores, watchmakers and jewellers, music stores and electric appliance repairers but excludes establishments predominantly engaged in selling building materials, paint, tools of trade, etc. (*g*) Establishments predominantly engaged in wholesaling new motor vehicles are included in this group. (*h*) Includes licensed bowling clubs, licensed golf clubs and licensed clubs, n.e.c.

VALUE OF RETAIL SALES: AT CURRENT AND CONSTANT PRICES: COMMODITY GROUPS (*a*)
($ million)

	Current prices			*Averages 1979-80 prices*		
Commodity group	*1980–81*	*1981–82*	*1982–83*	*1980–81*	*1981–82*	*1982–83*
Groceries	6,318.4	7,179.0	8,871.1	5,700.0	5,880.4	6,534.9
Butchers' meat	2,151.1	2,312.4	2,302.3	2,087.9	2,223.9	2,091.6
Other food (*b*)	3,430.0	3,834.0	4,054.6	2,980.0	2,996.7	2,927.1
Total food and groceries	*11,899.5*	*13,325.4*	*15,228.0*	*10,767.9*	*11,101.0*	*11,553.6*
Beer, wine and spirits	4,414.6	4,944.1	5,199.1	4,100.7	4,189.7	3,936.7
Clothing and drapery	4,691.6	5,266.0	5,670.7	4,388.0	4,608.9	4,677.4
Footwear	777.1	859.6	914.7	709.9	736.2	723.5
Hardware, china and glassware(*c*)	1,452.7	1,637.3	1,779.9	1,311.9	1,388.5	1,362.1
Electrical goods(*d*)	2,431.4	2,754.6	3,008.3	2,360.4	2,554.4	2,741.9
Furniture and floor coverings	1,732.9	1,918.5	1,880.2	1,570.9	1,610.0	1,415.3
Chemists' goods	1,650.6	1,864.4	1,939.9	1,469.4	1,518.5	1,414.3
Newspapers, books and stationery	1,287.9	1,405.0	1,600.7	1,103.1	1,041.4	1,052.2
Other goods(*e*)	2,845.0	3,182.8	3,317.5	2,649.4	2,763.9	2,628.0
Total (excluding motor vehicles, etc.) .	**33,183.3**	**37,157.7**	**40,539.1**	**30,431.6**	**31,512.5**	**31,505.0**

(*a*) Excludes Northern Territory and Australian Capital Territory. (*b*) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish and wrapped lunches. (*c*) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (*d*) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (*e*) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines.

CHAPTER 18

ENERGY

Introduction

Australia is well endowed with energy resources and is presently one of only five OECD countries that are net energy exporters. It presently supplies about two-thirds of its oil requirements from domestic sources and should be able to maintain this relatively favourable situation for some years at least.

Estimates of Australia's demonstrated economically recoverable resources of energy as at December 1982 are:

Brown coal	36,129 mega tonnes
Black coal	30,432 mega tonnes
Uranium	314,000 tonnes U
Natural gas	500.74 teralitres
Crude oil and natural gas liquids	409.20 gigalitres

Additionally, there are huge inferred resources of black coal amounting to about ten times the demonstrated figure quoted above but presently uneconomic, and resources of oil shale equivalent to about ten times the level of crude oil and condensate resources.

In recognition of the importance of energy resources to Australia's national wealth, policies have been developed to respond to the changing pattern of world energy supplies, to try to minimise uncertainty for the future and to develop other energy sources which can substitute for oil in a wide range of uses, in both domestic and export markets. The basic aims of these policies are:

- to attempt to ensure that an adequate supply of energy is available at all times;
- to facilitate the efficient use of energy in Australia and the efficient development of Australia's energy resources in response to the needs of domestic and overseas energy markets; and
- to seek an equitable sharing of the benefits of energy resource development amongst the Australian community.

More specific objectives in relation to liquid fuels are:

- to prepare Australia for major interruptions to oil supplies through stocks and emergency allocation schemes and other short lead time measures;
- to pursue, in an economically efficient manner, a high level of self-sufficiency in liquid fuels over the longer term through, for example:
  - encouraging conservation, and more efficient use of liquid fuels;
  - replacing the use of oil by relatively abundant energy sources such as coal and natural gas;
  - encouraging petroleum exploration and development; and
  - developing technologies for alternative energy sources, particularly liquid fuels and including renewables.

In establishing an appropriate framework within which Australia's energy industries can develop, the Government attaches key importance to the pricing and fiscal environment surrounding production, consumption and trade of Australia's energy resources. Realistic pricing of all energy resources is of fundamental importance in developing this framework. The policy of import parity pricing of indigenous crude oil has been, and is important in meeting the Government's policy objectives in the energy field generally and in the field of liquid fuels in particular. This is supplemented however by measures such as support for energy research and development. In this respect a total of $97 million has been committed to energy research and development through the National Energy Research, Development and Demonstration Program since its inception in 1978. The primary focus of the Program has been the co-ordination and support of research and development activity in Australia to achieve a full understanding of the extent and quality of Australia's energy resource base, and the development of appropriate technologies to enable these resources to be used to their fullest extent for the benefit of the Australian people.

The Government has indicated that a priority matter for its attention is reform of the existing arrangements for the taxation of energy and other extractive industries. It has expressed a preference for the replacement of the present complex system of Commonwealth and State taxes, royalties, licence fees and other charges currently applicable to many extractive industries with more equitable and efficient profits-related taxes.

Advice and co-ordination

Institutional Arrangements

The Commonwealth Minister of Resources and Energy has portfolio responsibility for national energy policy matters, including the commercial development of hydrocarbon fuels and minerals.

The Department of Resources and Energy provides advice to the Minister on energy policy and provides support for a number of advisory bodies including the National Energy Research Development and Demonstration Council (NERDDC), the Australian Minerals and Energy Council (AMEC), the National Oil Supplies Advisory Committee (NOSAC), the National Petroleum Advisory Committee (NPAC), the National Fuels Emergency Consultative Committee (NFECC), and the Coal Consultative Committee (CCC).

It is also responsible for implementation of action required from Australia's membership of the International Energy Agency (IEA) and for the national system of accounting for a control of nuclear materials under Australia's Agreement with the International Atomic Energy Agency (IAEA).

International Energy Agency

The International Energy Agency (IEA) was established in Paris in November 1974 as an autonomous institution within the framework of the Organisation for Economic Co-operation and Development (Australia did not seek membership at that time). Australia joined the IEA in May 1979.

The objective of the IEA is to implement the International Energy program as set out in the Agreement authorising the establishment of the Agency. This Agreement encompasses an Emergency Oil Sharing Scheme (EOSS) to be activated in an emergency supply situation, an information system on the international oil market, regular consultations with the major oil companies, the promotion of relations with oil producing and consuming countries, and long-term co-operation in energy aimed at reducing dependence on oil. The IEA's long-term co-operation program includes the promotion of energy conservation, the acceleration of the development of non-oil energy sources and the encouragement of energy research and development projects.

The main decision making body of the IEA is the Governing Board. The Board usually meets annually at Ministerial level and more frequently at senior official level. The Secretary of the Department of Resources and Energy is currently Chairman of the Governing Board meetings at official level. The IEA has standing groups on Long-Term Co-operation, the Oil Market, Emergency Questions, and relations with producers and other consuming countries and a Committee on Research and Development.

Research and Development

NERDDC

The Department of Resources and Energy through the National Energy Office provides policy and technical advice on energy research, development and demonstration and administers the National Energy Research, Development and Demonstration Program (NERD & D Program).

The National Energy Research, Development and Demonstration Council (NERDDC) was established in May 1978. It advises the Minister for Resources and Energy on the development and co-ordination of a national program of energy research and the disbursement of funds under the NERD & D Program. Council consists of twelve members drawn from government, private industry and tertiary institutions who are appointed by the Minister on the basis of established expertise in the energy field. It is supported by seven Technical Standing Committees (TSCs), covering all major areas of energy technology, which provide expert technical advice. The NERD & D Program is funded from the accrued funds paid to the Coal Research Trust Account under the provision of the *Coal Research Assistance Act* 1977 and from the Energy Research Trust Account for which funds are provided from a Departmental Appropriation for energy research.

During 1982–83 a further $17 million was committed to energy research projects over a wide range of energy technologies. This brought the total committed to date under the NERD & D Program to around $97 million. NERDDC and its TSCs also assist the Department in monitoring scientific and technical progress and performance of projects being supported.

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Energy research within the Institute of Energy and Earth Resources is carried out with the objectives of improving methods of locating, evaluating, defining and characterising Australia's energy resources and of planning their development and effective use, consistent with the minimisation of environmental stresses. Divisions of the Institute engaged in energy research are the Division of

Geomechanics at Syndal (Vic.); the Division of Energy Chemistry at Lucas Heights (N.S.W.); the Division of Energy Technology at Highett (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.); the Division of Mineral Engineering at Clayton (Vic.); the Division of Mineral Physics at North Ryde (N.S.W.), Lucas Heights (N.S.W.) and Port Melbourne (Vic.), and the Physical Technology Unit at Ryde (N.S.W.).

Research on certain renewable sources of energy is carried out in the Institute of Biological Resources (Divisions of Plant Industry, Tropical Crops and Pastures, Water and Land Resources and the Centre for Irrigation Research) and in the Institute of Industrial Technology (Divisions of Applied Organic Chemistry and Chemical Technology).

NOSAC

The National Oil Supplies Advisory Committee (NOSAC) was formed in 1983 by the amalgamation of separate Commonwealth/industry and Commonwealth/State bodies set up during the period of tight oil supply in 1979. Representatives of the Commonwealth Government, State Government energy authorities and major domestic oil producers and refiners meet in NOSAC about three times a year to review the situation and outlook for domestic and international oil supplies. Matters discussed include oil production, new oil and gas developments, imports, exports, stock levels, regional shortages, industrial relations, shipping, technical matters and government policies affecting the oil industry.

AMEC

The Australian Minerals and Energy Council (AMEC) is a Commonwealth/State Ministerial body which was established in 1976, replacing the former Australian Minerals Council. It is principally a body for consultation on energy matters and provides a forum for Ministers to discuss energy policy issues of mutual concern and to co-ordinate policy action. It is assisted by several committees including the AMEC Advisory Committee, the Standing Committee on Offshore Petroleum Legislation, the Sub-committee on Waste Oil Recovery and the Working Group on Mapping for Mining Developments.

ACCC

The Australian Coal Consultative Council (ACCC) was established following a Coal Industry Conference in Canberra on 30 March 1983. Its terms of reference are to review and report from time to time on the economic and structural problems of the industry. The Council is a tripartite body, chaired by the Minister for Resources and Energy. Its membership comprises the New South Wales and Queensland Ministers responsible for the industry, coal mine proprietors, mining unions and the ACTU. The Australian Mining Industry Council was recently granted 'observer' status.

At the first meeting of the Council on 29 April 1983, it was decided that a National Research Group reflecting the tripartite composition of the Council should be set up to advise the Council.

NPAC

Membership of the National Petroleum Advisory Committee (NPAC) is drawn from agricultural, general aviation, fishing, manufacturing, mining, shipping and transport industries, oil industry, trade union movement and motorists' organisations as well as Commonwealth, State and Territory Governments. The Department of Resources and Energy provides the Secretariat for NPAC. In accordance with the NPAC recommendations the Commonwealth Government has introduced the *Liquid Fuel Emergency Act 1983* and established with the States and the Northern Territory the National Fuels Emergency Consultative Committee.

NFECC

The National Fuels Emergency Consultative Committee (NFECC) chaired by the Commonwealth and comprising officials of the Commonwealth, States and the Northern Territory, was established in late 1983 to consult and advise Governments on matters relevant to the preparation for, and detailed management of, a national liquid fuels crisis; and to act as the prime channel of consultation between Governments in the event of such a crisis.

Resources

Black coal

Black coal is currently second to petroleum products as the largest source of primary energy in Australia. By world standards, in relation to present population and consumption, Australia is fortunate in the availability of easily worked deposits of coal. The country's main black coal fields are located in New South Wales and Queensland, not far from the coast and from the main centres of population.

Australia's inferred resources of black coal are very large, amounting to over 500,000 megatonnes (Mt). At 31 December 1982, Australia's demonstrated economic resources of black coal were estimated to total 52,868 Mt of which 30,432 were considered recoverable. These recoverable resources are located almost entirely in the Sydney Basin in New South Wales and the Bowen Basin in Queensland. There are other coal-bearing basins in New South Wales and Queensland, and small deposits are being worked in Western Australia, South Australia and Tasmania.

For further details relating to the production of black coal in Australia see Chapter 16, Mineral Industry. Details about the nature and age of black coal are given in Year Book No. 64, pages 460 and 461.

Brown coal

Australia's measured and indicated resources of brown coal are estimated at 83,600 Mt, located principally in Victoria's Latrobe Valley (35,030 Mt). Small deposits exist in other areas of south Gippsland, in south-eastern Victoria at Gelliondale and in the south-central region at Anglesea, Bacchus Marsh and Altona. Deposits are also known at many places along the southern margin of the continent, as far north as central Queensland, and large deposits are being tested in the Kingston area of South Australia, the Esperance area of Western Australia and at Rosevale in the north-east of Tasmania.

Because brown coal has a relatively low specific-energy value and high water content, its utilisation depends on large-scale, low-cost mining and negligible transportation costs in its raw state.

In Victoria the brown coal industry has reached a high degree of sophistication in mining, on-site development for power generation, briquetting and char manufacture. Production of brown coal in Victoria during 1981–1982 was 33.4 Mt. The brown coal deposits of the Latrobe Valley have been developed by the State Electricity Commission of Victoria (SECV) for the generation of electricity. By the end of 1982, about 800 Mt of raw brown coal had been mined.

Energy research and development statistics

Estimates of the expenditure on energy R&D carried out in Australia during 1979–80, and classified by energy objective, are presented in the table below.

The estimate of manpower resources devoted to energy R&D in Australia during 1979–80 was 2,570 man years. Of this amount, business organisations accounted for 980 man years, general government organisations for 789 man years and higher education organisations for 801 man years.

More detailed statistics are contained in the ABS publication *Research and Experimental Development; Energy Production, Utilisation and Conservation, All Sectors, Australia, 1979–80* (8110.0)

ENERGY RESEARCH AND EXPERIMENTAL DEVELOPMENT(a), AUSTRALIA, 1979-80 DETAILS OF R & D EXPENDITURE BY ENERGY OBJECTIVE(b)

($'000)

Energy objectives(b)			*Sector of performance(d)*		*Source of funds(f)*	
Energy codes	*Description*	*Total expenditure(c)*	*Business enterprises(e)*	*General government and higher education*	*Industry*	*Government*
	Production and utilisation of energy—					
513	Oil and gas —mining extraction techniques	170	(g)	(g)	(g)	(g)
111	—refining, transport and storage	1,311	756	555	753	558
112,523,533	—other	5,278	(g)	(g)	(g)	(g)
113,114,514,524,534	Oil shale and tar sands	696	(h)1,593	(h)4,552	(h)1,636	(h)4,508
512	Coal—mining extraction techniques	4,961	2,169	2,793	1,653	3,308
121	—preparation and transport	5,523	3,865	1,658	3,385	2,138
122	—combustion	3,844	3,216	627	2,956	888
211	—conversion	7,761	2,285	5,476	1,183	6,578
123,522,532	—other	8,464	6,742	1,722	5,706	2,758
131	Solar—heating and cooling	7,224	3,103	4,121	2,925	4,299
132	—photo electric	1,800	521	1,279	596	1,204
133	—thermal electric	287	73	214	16	271
141	Nuclear—non-breeder—light water reactor	18,558	5,815	16,289	6,177	15,927
142	—other converter reactor					
143,511,521,531	—fuel cycle					
144	—supporting technologies					
145	breeder	–				
146	—fusion	3,545				
151	Wind	907	278	629	174	733
152	Ocean					
153	Geothermal					
221	Biomass	4,091	1,704	2,387	1,486	2,605
154	Other sources and new vectors	1,283	668	615	434	849
	Conservation of energy					
311	Industry	3,852	2,794	1,058	2,249	1,603
312	Residential and commercial	2,344	851	1,493	956	1,388
313	Transportation	4,775	3,502	1,273	2,551	2,225
314	Other	640	482	158	462	178
	Other energy R & D (including supporting technologies)—					
411	Electric power conversion	2,262	1,614	648	1,456	807
412	Electricity, transmission and distribution	3,182	1,888	1,294	2,054	1,128
413	Energy storage, n.e.i.	1,098	(i)	(i)	(i)	(i)
414	Energy system analysis	869	30	839	59	810
415	Other	2,503	(j)619	(j)2,982	(j)772	(j)2,830
	Total all energy objectives	**97,228**	**44,567**	**52,661**	**39,636**	**57,592**

(a) Refers to R & D activity predominantly directed towards producing, storing, transmitting, utilising and conserving energy. (b) The energy objective categories represent ultimate national needs rather than the immediate objective of the researcher or the organisation performing the energy R & D. (c) Includes expenditure associated with overhead staff providing indirect services to energy R & D. (d) The sector classification used is adapted from the guidelines specified by the OECD for use in the conduct of R & D studies. (e) Excludes enterprises in ASIC Division A—i.e. enterprises mainly engaged in agriculture, forestry, fishing and hunting. (f) In accordance with IEA practice, source of funds are classified as either Industry or Government. (g) Included with oil shale and tar sands (codes 113, 114, 514, 524, 534). (h) Comprises codes 513, 112, 523, 533, 113, 114, 514, 524, 534. (i) Included with other (code 415). (j) Comprises codes 413 and 415.

Petroleum

For a definition of petroleum, together with a brief description of recovery techniques and the history of the search for petroleum in Australia, *see* Year Book No. 64, pages 461 and 462.

Major prospects for new oil discoveries are in untested areas and it is likely that most of Australia's undiscovered oil will be contained in only a few fields. Extrapolation from known areas suggests that undiscovered oil will be of the lighter types and that more gas fields than oil fields will be found. Assessments by the Bureau of Mineral Resources, Geology and Geophysics in March 1983 indicate that there is a 50 per cent chance of finding at least another 286 gigalitres (GL) (1,800 million barrels) of crude oil in Australia. This compares with demonstrated economic resources of 260 GL (1,640 million barrels) and demonstrated sub-economic resources of 22 GL (138 million barrels) as at 31 December 1982.

PETROLEUM RESOURCES (a) AS AT 31 DECEMBER 1982

(*Source:* Department of Resources and Energy)

	Demonstrated Economic (b)				*Demonstrated Sub-economic (c)*			
Basin	*Crude oil GL*	*Condensate GL*	*LPG GL*	*Sales gas* 10^9m^3	*Crude oil GL*	*Condensate GL*	*LPG GL*	*Sales gas* 10^9m^3
Bowen-Surat (Qld) . .	1	—	—	2	—	—	—	3
Gippsland (Vic) . . .	225	28	59	190	—	—	—	—
Gippsland-Bass-Otway (Vic./Tas.)	—	—	—	—	16	9	9	45
Cooper (S.A./Qld) . .	12	6	12	80	—	1	1	7
Carnarvon-Canning (W.A.)	11	47	48	336	—	—	—	—
Carnarvon-Browse-Bonaparte (W.A./N.T.) . . .	—	—	—	—	6	16	20	209
Perth (W.A.)	1	—	—	3	—	—	—	—
Amadeus (N.T.) . . .	10	2	4	30	—	—	—	—
Total	**260**	**83**	**123**	**641**	**22**	**26**	**30**	**265**

(*a*) Based on the McKelvey classification which sub-divides resources in terms of the economic feasibility of extraction and their certainty of occurrence. (*b*) Demonstrated economic resources are resources judged to be economically extractable and for which the quantity and quality are computed from specific measurements and extrapolation on geological evidence. (*c*) Demonstrated sub-economic resources are similar to demonstrated economic resources in terms of certainty of occurrence but are judged to be sub-economic at present.

PETROLEUM PRODUCTION IN AUSTRALIA

(*Source:* Department of Resources and Energy)

Year	*Crude oil and Condensate ML*	*LPG (a) ML*	*Natural gas GL*
1978–79	24,847	3,170	7,767
1979–80	23,667	3,111	9,008
1980–81	23,052	2,982	10,435
1981–82	22,378	3,029	11,550
1982–83	22,069	2,906	11,654

(*a*) Naturally occurring.

Liquefied petroleum gas

Liquefied petroleum gas (LPG) is a valuable co-product of oil and gas production and petroleum refining. The major constituents of LPG are propane, propylene and iso- and normal-butane, which are gaseous at normal temperatures and pressures and are easily liquefied at moderate pressures or reduced temperature. Because of the low boiling points of its constituents LPG has to be refrigerated or pressurized in storage and transport, which makes operations expensive. LPG is a promising alternative transport fuel for high mileage vehicles in capital cities.

Identified economically recoverable resources of LPG at December 1982 of 100,380 megalitres (ML) are concentrated in Bass Strait, the North West Shelf and the Cooper Basin. In addition the Bureau of Mineral Resources, Geology and Geophysics estimates there is an 80 per cent probability of future discoveries identifying a further 90,000 ML of LPG.

Production of naturally occurring LPG in Australia in 1982-83 was 2,906 ML (virtually all being extracted from crude oil and natural gas from the Bass Strait fields). About 66 per cent of Australia's LPG production is exported (2,334 ML in 1982-83)—mainly to Japan. Exports could be diverted to meet domestic needs, given sufficient incentive. Most of Australia's 1982-83 consumption of LPG of 1,029 ML was obtained from oil refineries and as a by-product of the chemical industry.

The Cooper Basin producers have announced their intention to recover LPG from mid-1984 as part of a liquids extraction scheme. Annual output from the Basin is expected to be about 1 ML in the mid-1980s.

Pricing of Australian crude oil

The pricing of Australian crude oil at import parity levels is fundamental to energy policy in Australia. Crude oil is a scarce and valuable resource and the Government considers that it should be competitively priced, to ensure that its usage recognises this value. Import parity pricing is considered essential to encourage:

- conservation of liquid fuels;
- exploration and development;
- substitution by more plentiful gaseous and solid fuels; and
- the economic development of liquid fuel substitutes.

Import parity pricing provides the basis for the long-term security of supply for Australia and the continuous adaption of the Australian economy to changing world energy prices.

The present pricing and excise arrangements are based on the June 1983 Commonwealth Government announcements. Refiners pay import parity prices for all crude oil. Producers receive the full import parity price for oil discovered on or after 18 August 1976. For oil discovered before 18 September 1975 (old oil), producers pay excise according to the annual production of the producing field (or area). These rates are given in the following table.

CRUDE OIL PRODUCTION: EXCISE PERCENTAGES PAID AND PRODUCER RETURNS, AUSTRALIA

		Producer returns (a) as from 1 July 1983		
Annual production from field/area	*Excise as a percentage of Bass Strait import parity price*	*Bass Strait*	*Barrow Island*	*Cooper Basin*
Megalitres	*Percentage*	*$/kilolitre*	*$/kilolitre*	*$/kilolitre*
0-50	0	229.85	234.23	229.64
50-100	5	218.36	222.74	218.15
100-200	15	195.37	199.75	195.16
200-300	20	183.88	188.26	183.67
300-400	40	137.91	142.29	137.70
400-500	70	68.95	73.33	68.74
500-600	80	45.97	50.35	45.76
Greater than 600	87	29.88	34.26	29.67

(*a*) Moonie and Dongara crude oils receive the full import parity price of $240.59/kL and $214.56/kL respectively, since their production does not exceed 50 ML per annum. Jackson crude oil receives the full import parity price of $219.67/kL since its production is excise free new oil.

The import parity prices are currently reviewed every six months (1 January and 1 July), but more frequently if there are major changes in circumstances. The prices are based on the landed cost of Saudi Arabian Light crude oil at the nearest refinery port to the producing field adjusted for domestic freight costs and quality differentials. The current import parity prices, from 1 July 1983, are $229.85/kL ($36.53/barrel) for Bass Strait crude, $234.23/kL ($37.22/barrel) for Barrow Island, $214.56/kL ($34.10/barrel) for Dongara, $219.67/kL ($34.91/barrel) for Jackson, $229.64/kL ($36.49/barrel) for other Cooper Basin, $240.59/kL ($38.23/barrel) for Moonie and nearby areas. These prices are based on a $US29/barrel price for the marker crude, Saudi Arabian Light.

Royalties are paid to the relevant State Governments for onshore production and, in the case of offshore production, are shared between the Commonwealth and the States under the Petroleum (Submerged Lands) (Royalty) Act.

Crude Oil Allocation Scheme

The crude oil allocation scheme was designed to stimulate the production of Australian crude oil by guaranteeing a market for this production which was then a relatively expensive source of crude oil. The present allocation scheme first came into operation in September 1971. On 17 September 1980 the then Minister for National Development and Energy announced the extension of this scheme, subject to some modifications, until 31 December 1984.

The Scheme provides for the allocation of indigenous crude oil to refiner/marketers based on their market share of most refined petroleum products sold in Australia.

The only major petroleum product that currently does not attract a full allocation is fuel oil.

An important modification made to the crude oil allocation scheme in 1980 was that from 1 January 1981, producers of crude oil who continue the sale of gas condensate (liquid petroleum produced in association with natural gas) may retain an equivalent volume of crude oil for their own use or disposal. This producers' entitlement to crude oil is however subject to the crude oil excise and import parity pricing arrangements. Condensate marketed separately from a crude oil stream is not subject to allocation and excise and is sold at free market prices.

In August 1983, the Government announced that exports of Bass Strait crude oil which are surplus to domestic refiners' requirements would be permitted. Government approval would be required for each export cargo.

The crude oil allocation scheme facilitates an equitable distribution, to the refiners, of indigenous crude oil at the import parity price.

Pricing of liquefied petroleum gas (LPG)

Under the pricing arrangements applying since April 1980, the Commonwealth Government sets the price that the producers receive for LPG sold for automotive, domestic and traditional commercial/industrial uses at a level such that the resulting retail prices provide an incentive for its use as an automotive fuel, and do not cause undue hardship to other users. The policy was designed to maintain an ongoing substantial margin between the prices of petrol and LPG. The Government's LPG price scheme does not apply to large scale non-traditional commercial/industrial uses, exports or petrochemical uses. In these areas, the price is determined by commercial negotiation.

The price set by the Government for both naturally occurring and refinery produced LPG is determined at the lesser of $205 per tonne indexed to increases in the import parity price of indigenous crude oil since 1 January 1980, and the export parity price. Until 30 June 1981, the index linked price applied, but following a significant fall in the world market price for LPG, the prices applying were then based on the export parity price until 30 June 1983. Due to increases in international prices and the March 1983 devaluation of the Australian dollar, the designated price at 1 July 1983 was the crude oil linked price of $304.44 per tonne.

Under the excise arrangements announced on 8 April 1980, producers of naturally occurring LPG from fields in production prior to 17 August 1977 pay excise at a rate equivalent to 60 per cent of the excess of the weighted average of domestic and export prices of $147 per tonne. Naturally occurring LPG from fields brought into production on or after 17 August 1977 remains free of excise.

A factor in the retail price of LPG and reticulation gas produced from LPG and naphtha is the subsidy of $80 per tonne introduced during 1980 for household users and commercial and industrial users in areas without access to natural gas. The subsidy is due for review by March 1984.

Oil shale

A description of the nature and location of Australian oil shale deposits is given in Year Book No. 67, page 468.

Investigations into shale oil development are concentrated on the deposits at Rundle and Condor. In addition, studies are continuing at other deposits, including Yaamba, Julia Creek and Nagoorin.

Uranium

Details concerning the use and discovery of uranium and the development of uranium mining in Australia are contained in Year Book No. 67, pages 468 and 469.

Following the change of Government in March 1983 the new Government instituted a complete review of all aspects of Australia's policies as they relate to uranium, covering the future of existing mines, the development of new mines, the terms and conditions to be imposed on any exports and the question of further processing in Australia including enrichment. The outcome of this review was expected to be announced in late 1983.

Pending the completion of this review, commitments under existing approved contracts were being met. In the case of France however, future supplies of Australian uranium for end use in France were not being approved in circumstances of continued French nuclear testing in the South Pacific.

Australian Atomic Energy Commission (AAEC). The AAEC was established as a statutory body by the Commonwealth Parliament under the *Atomic Energy Act* 1953.

The AAEC's activities are controlled by a Commission which is responsible to the Minister for Resources and Energy. The Atomic Energy Act provides for the Commission to consist of five Commissioners including a Chairman.

Moving in its earliest days towards the planning and construction of a nuclear research establishment at Lucas Heights near Sydney, the Commission arranged for a nucleus of scientists and engineers to obtain training and experience through overseas attachments, mainly in the United Kingdom. By the late 1950's a research and development (R&D) program had been initiated at its research establishment.

The Commission's current nuclear program includes radioisotope production and applications, waste management studies, environmental science (particularly in relation to uranium mining activities) and provision of support for regulatory and international operations. The Commission also operates two nuclear research reactors 'HIFAR' 10 megawatt (MW) thermal and 'MOATA' 100 kilowatt (kW) thermal at Lucas Heights.

The programs, structure and functions of the AAEC are currently under review. Particular attention is being given to ensuring that the functions and programs of the AAEC are appropriate to national requirements.

Current expenditure by the AAEC is of the order of $39 million a year. Staff totals some 1120 professional, technical, trade, administration and support personnel.

The AAEC participates in the activities of the Australian Institute of Nuclear Science and Engineering. The Institute, which has a corporate membership comprising the Commission and the Australian universities, is concerned with the awarding of studentships, fellowships and research grants, with the organising of conferences and with arranging the use of AAEC facilities by research workers within the universities and colleges of advanced education. The Australian School of Nuclear Technology, located at Lucas Heights, is a joint enterprise of the AAEC and the University of New South Wales. Courses are provided regularly on such subjects as radio-nuclides in medicine, radiation protection and nuclear technology. Participants have been drawn from Australia, New Zealand, Asia, Africa, Papua New Guinea and the Pacific region.

The Atomic Energy Act is the principal Commonwealth legislation in the nuclear field. As well as being the legislative basis for the AAEC, the Act provides for Commonwealth powers over uranium and nuclear materials. It was also used as the basis for the authorisation of the Ranger Uranium Mine.

The Government's policy is to replace the Atomic Energy Act with new legislation for the AAEC, and to give effect to Australia's international nuclear non-proliferation and safeguards obligations.

For further details relating to the production of uranium in Australia see Chapter 16, Mineral Industry.

Thorium

Thorium is about three times as abundant in the earth's crust as uranium. However, because of the resistance of primary thorium minerals to chemical alteration, secondary thorium minerals are rare. Thorium therefore occurs in fewer geological environments than uranium. The bulk of potentially exploitable resources of thorium occur in essentially lower grade accumulations than the exploitable resources of uranium. Most of the world's thorium resources occur in monazite, a complex silicate which is currently recovered primarily for its content of rare-earth oxides. Primary thorium minerals (including monazite) are resistant to oxidation and form economically important placer deposits. Large deposits occur throughout the world in beach and stream placers and also as hard-rock deposits in veins, sedimentary rocks, alkalic igneous rocks and carbonatites.

In Australia, by-product monazite in titanium-bearing minerals sands on the east and west coasts of the continent is currently the only economical source of thorium, although other occurrences of thorium minerals are known. Australia currently supplies about half of the world's monazite requirements.

The Commonwealth Government controls the export of thorium and thorium minerals under the authority of the Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The export of minerals containing thorium and thorium compounds and alloys is prohibited without the approval of the Minister for Trade.

Solar energy

Solar radiation is measured continuously on a routine basis by the Bureau of Meteorology at 28 stations throughout Australia. These stations also supply data on air temperatures, dewpoint and wind.

Like wind, tidal and wave energy, solar energy is inexhaustible and shares with these energy sources a number of properties which make it both difficult and costly to collect, store and transform into useful work. In particular, these are the characteristics of low intensity and of geographic, seasonal and daily variations.

The use of solar energy for domestic hot water supply is well established commercially in Australia and the solar hot water systems industry production now has a value of about $44 million per annum.

With a view to industrial application, advanced collectors have been designed which can produce steam. Currently, however there appear to be few applications of solar energy which are economically attractive to industry.

The use of passive solar design principles in housing is increasing and relatively low cost passive designs have been developed. In the area of electricity generation, photo-voltaics are already viable in some small-scale specialist applications, for example in navigation and communications stations. If costs are reduced, solar electricity may be used increasingly in the future for remote homestead or community power supply and for water pumping. Solar cooling is not economic at this stage owing to high capital costs and low efficiencies.

Ocean thermal energy

In Australia, virtually no assessment of the potential of the ocean thermal energy source has been made. It has been suggested that tropical waters such as those off the Queensland coast would be suitable, but power generated from this area would be a considerable distance from the major power consumers in the south and probably not competitive with electricity based on coal.

Wind energy

Using data from Bureau of Meteorology stations, CSIRO has undertaken a continental wind assessment of Australia. In addition, a number of site specific wind resource assessments have been carried out by CSIRO and other bodies. Broadly, these studies indicate that while the bulk of the Australian inland has relatively low average windspeeds, some coastal and island localities have favourable wind energy resources, notably on the Western Australian, South Australian and Tasmanian coasts, in Bass Strait and on Lord Howe Island.

At present the use of wind energy in Australia is confined principally to mechanical windmills for water pumping and small wind electricity generators for remote areas. In addition three larger machines in the 20-55 kW range are currently being demonstrated on Rottnest Island in Western Australia and a 55 kW wind generator is operating at Ballarat.

It is unlikely that wind energy will be able to compete on a widespread and large scale with coal for electricity generation in Australia, but where wind resources are favourable wind turbines could find increasing application in remote areas, which currently rely on diesel fuel for electricity production.

Geothermal energy

Most of Australia's geothermal resources are of conduction-dominated type. The most extensive and well documented study in Australia of subsurface temperatures has been made in bore-holes in the Great Artesian Basin. In this basin, about 20 per cent of indexed water bores penetrate to depths greater than 1,000 m and since geothermal gradients are generally greater than 30°C/1,000 m, it is reasonable to assume that hot water can be obtained from such aquifers. Of the total number of indexed water bores, only a very small proportion have water temperatures greater than 100°C.

Australia's geothermal resources in other basins are probably comparable with that in the Great Artesian Basin, since the extrapolation of flow rates and temperatures to other sedimentary basins is considered geologically reasonable. Economic and technical difficulties suggest that in the foreseeable future the potential use of our geothermal resources will be largely restricted to hot water supply, for space heating and light industrial purposes.

In Australia, it has been estimated by the Bureau of Mineral Resources that identified (demonstrated and inferred) geothermal resources are about 1 per cent of Australia's annual primary energy consumption. Undiscovered geothermal resources may be many orders of magnitude greater than the above estimate.

Tidal energy

Tidal energy is a dispersed energy source derived from regular fluctuations in the combined gravitational forces exerted by the moon and the sun, at any one point on the earth's surface, as the earth rotates. The mean tidal range in the open ocean is about 1 metre, but under suitable hydraulic and topographical conditions, much higher tides than this build up in places around coasts, due to resonance. Because only two commercial tidal plants exist so far in the world, relatively little is known about the possible environmental impact of large-scale utilisation. It is unlikely, however, that tidal installations would be entirely without effect on the ecological life of bays and estuaries within their area of influence due, for instance, to silting and concomitant dredging.

Around Australia there are theoretically very large amounts of tidal energy available, especially on the north-west coast where the tidal range is as great as 11 metres and where the topography is suitable. The tidal potential of this region has been the subject of a series of investigations, including one carried out in 1965 on one of the most promising sites at Secure Bay. It was concluded that a minimum of 12 years design and construction time would be required, although the cost of electricity at the site would be similar to that derived from conventional thermal stations. However, the long distances to potential markets result in a doubling of these electricity generation costs. Subsequent studies by the State Energy Commission of Western Australia have indicated that lead times and construction costs could be reduced but not sufficiently to make tidal energy economically attractive even if a suitable electricity consumer were nearby.

The likelihood of early exploitation of this resource would appear to be less than in other countries, if only because of the long distances involved in transmission to population centres. In Australia, the major consumer regions are located along coastlines where the tidal range is very small.

Biomass

Biomass includes crops, wood, agricultural and forestry residues, and animal wastes. Currently only two forms of biomass are used significantly as energy resources in Australia. These are firewood and bagasse, both converted to energy by direct combustion.

Approximately 2 megatonnes of firewood are used annually in Australia, equivalent in energy terms to 82.3 petajoules, or 2.6% of Australia's primary energy demand. Production is expected to remain stable at about this level through the 1980s.

Bagasse is the fibrous residue remaining after extraction of the juice from sugar cane. It is the major fuel used in the sugar industry, providing 68.5 petajoules or 2.2% of Australia's total primary energy demand.

Biomass also has a possible use as a source of liquid fuels for transport, particularly ethanol and methanol. Technologies are commercially available for converting biomass to liquid fuels. The major impediments to its current use are that it is not competitive with conventional fuels and generally vehicle modifications are necessary for satisfactory operation.

In 1979, the CSIRO completed a survey of the potential for the production of these fuels from agricultural and forestry resources in Australia. The resources considered were both new energy crops and forest plantations, as well as the residues from existing crop and forest production. In estimating potential new crop production, it was assumed that all land with suitable climate, soil and terrain for an energy crop would be available for energy farming except land at present under crops or sown pastures. The total biomass resources considered could provide a net liquid fuels output of 460 petajoules, 65% of the energy used as liquid fuel in transport in 1977-78. This is a net figure taking into account the liquid fuel used in production. It does not take into account socio-economic considerations such as more profitable or socially desirable uses of the land available for new crops. It must be considered as an upper limit only.

Recent studies have shown that, largely as a result of the cost of production of the feedstocks, liquid fuel from biomass is at a major economic disadvantage compared to petroleum-based fuels, and is unlikely to be commercialised on a significant scale in the near future.

Electric power

The information contained in this section relates to situations existing and projects contemplated, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book.

Hydro-Electric Resources

With the exception of Tasmania, Australia is generally not well-endowed with hydro-electric resources because of low average rainfall and limited areas of high relief. Major hydro-electric potential is confined to Tasmania and the Great Dividing Range areas of Victoria, New South Wales and Queensland, with some small potential on rivers draining into the Timor Sea in Western Australia and the Northern Territory.

The practical potential of hydro-electric power in Australia has been estimated at 24,000 gigawatt hours (GWh) per year, of which about 60% has currently been developed. In 1981/82, hydro-electric generation of 14,516 GWh was slightly down on the previous year owing to drought conditions.

At 30 June 1982 the installed hydro-electric generating capacity of 6,332 mega watts (MW) represented 23% of total installed capacity.

Future hydro development will be mainly limited to environmentally acceptable sites in Tasmania, and to a lesser extent North Queensland, as most of the low cost resource elsewhere has already been developed. Although hydro-electric power stations will continue to be constructed into the 1990s and probably beyond, hydro's share of total generation will decline as increasing load is met mainly by coal-fired power stations.

Snowy Mountains Hydro-Electric Scheme

The Snowy Mountains Scheme is a dual purpose complex which supplies water for generation and irrigation. It is located in south-eastern Australia, and on its completion was one of the largest engineering works of its type in the world. It impounds the south-flowing waters of the Snowy River and its tributary, the Eucumbene, at high elevations and diverts them inland to the Murray and Murrumbidgee Rivers through two tunnel systems driven through the Snowy Mountains. The Scheme also involves the regulation and utilisation of the headwaters of the Murrumbidgee, Tumut, Tooma and Geehi Rivers. The diverted waters fall some 800 metres and together with regulated flows in the Geehi and Tumut River catchments generate mainly peak load electricity for the States of New South Wales and Victoria and the Australian Capital Territory as they pass through power stations to the irrigation areas inland from the Snowy Mountains.

The Scheme was designed and constructed by the Snowy Mountains Authority which was established by the *Snowy Mountains Hydro-Electric Power Act* 1949. It was completed in 1974 and has an installed capacity of 3,740 MW and an annual average energy output of over 5,000 GWh. An average of 2,300 GL of water per year has become available for irrigation in the Murray and Murrumbidgee rivers as a result of the Scheme.

The operation and maintenance of the Scheme is directed by the Snowy Mountains Council which was established in 1959 following an agreement between the Commonwealth, New South Wales and Victorian Governments. The Commonwealth Government reserves 670 GWh of the Scheme's output for supply to the Australian Capital Territory, the remainder being shared between the States of New South Wales and Victoria in the ratio 2:1.

Electricity generation and transmission

The following table shows details of thermal and hydro electricity generated in Australia during recent years.

ELECTRICITY (*a*)—THERMAL AND HYDRO

Year	*Million kWh*
1976–77	82,522
1977–78	86,095
1978–79	90,857
1979–80	95,910
1980–81	100,782
1981–82	105,034

(*a*) Figures represent estimates of total electricity generated by public utilities, factories generating for their own use, and factories supplying electricity for domestic and other consumption.

NEW SOUTH WALES

Electricity Commission of New South Wales and electricity supply authorities

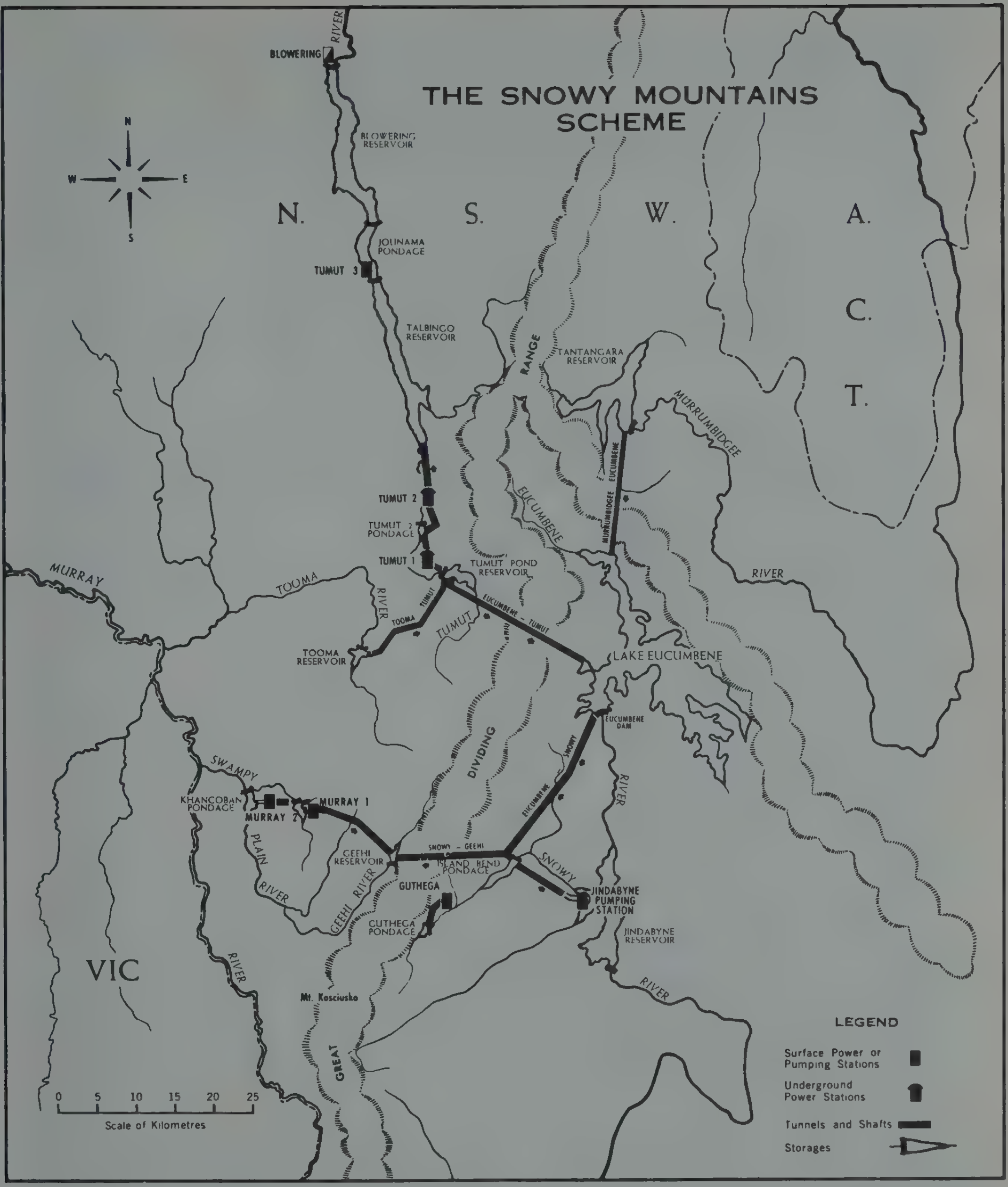
The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1983 there were 28 retail supply authorities throughout the State, comprising 23 electricity county councils (consisting of groups of shire and/or municipal councils), 1 city council, 1 shire council, and 3 private franchise holders.

Most electricity distribution areas have been consolidated into county districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes and administered by a county council comprising representatives elected by the constituent councils. Of the 175 cities, municipalities and shires in New South Wales, 172 are included in one or other of the 23 electricity county districts.

The Energy Authority of New South Wales

The *Electricity Development Act* 1945, confers broad powers on the Energy Authority to co-ordinate and develop the public electricity supply industry. The functions of the Authority include the


THE SNOWY MOUNTAINS SCHEME
N
W
E
S
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A. C. T.
VIC
BLOWERING
RIVER
BLOWERING RESERVOIR
JOUNAMA PONDAGE
TUMUT 3
TALBINGO RESERVOIR
TANTANGARA RESERVOIR
RANGE
MURRUMBIDGEE
EUCUMBENE
MURRUMBIDGEE EUCUMBENE
TUMUT 2
TUMUT 2 PONDAGE
TUMUT 1
TUMUT POND RESERVOIR
MURRAY
TOOMA
RIVER
TOOMA
TUMUT
TUMUT
EUCUMBENE - TUMUT
TOOMA RESERVOIR
LAKE EUCUMBENE
RIVER
EUCUMBENE DAM
DIVIDING
SNOWY
EUCUMBENE
RIVER
SWAMPY
KHANCOBAN PONDAGE
MURRAY 1
MURRAY 2
PLAIN
RIVER
GEEHI RESERVOIR
SNOWY - GEEHI
ISLAND BEND PONDAGE
SNOWY
GEEHI RIVER
GUTHEGA
GUTHEGA PONDAGE
JINDABYNE PUMPING STATION
JINDABYNE RESERVOIR
RIVER
RIVER
Mt. Kosciusko
GREAT
0 5 10 15 20 25
Scale of Kilometres
LEGEND
Surface Power or Pumping Stations
Underground Power Stations
Tunnels and Shafts
Storages

PLATE 40

promotion of the wise use of electricity, especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and the standardising of materials and equipment.

The Authority continues to administer the Rural Electricity Subsidy Scheme which terminated on 30 June 1983. Under the scheme, the rural electrical development of the State has now been virtually completed where the extension of supply is economically feasible. Local electricity suppliers receive subsidies from the Authority towards the cost of new rural lines. At 30 June 1983 the Authority was committed to the payment of $45,216,203 in subsidies, of which $39,661,585 had been paid. Further details of the operation of the scheme are given in Year Book No. 56, page 956.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of at night road accidents. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 1,866 kilometres of traffic routes throughout the State.

Generation and transmission

Of the State's electrical power requirements during the year ended 30 June 1983, almost all was generated in New South Wales (89.8 per cent by thermal fired power stations, 5.9 per cent from the Snowy Mountains Hydro-electric Authority and 0.9 per cent by other hydro-electric stations). The remaining 3.4 per cent was supplied by various sources, including interchange with other States and other small generating authorities in New South Wales.

Major generating stations. At 30 June 1983 the major power stations of the State system of the Electricity Commission of New South Wales and their nominal capacities were as follows: Liddell (Hunter Valley), 2,000 MW; Munmorah (Tuggerah Lakes), 1,400 MW; Vales Point (Lake Macquarie), 2,195 MW; Eraring, 1,320 MW; Wallerawang (near Lithgow), 1,240 MW. The total nominal capacity of the Electricity Commission's system as at 30 June 1983 was 9,851 MW. The greater part of the Commission's generating plant is concentrated within a hundred and eighty-five kilometre radius of Sydney.

Major transmission network. The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 500 kV, 330 kV, 132 kV, 66 kV and some 33 kV transmission lines links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically over 650 kilometres inland.

At 30 June 1983 there were in service, 3,940 circuit kilometres of 330 kV, 7,328 kilometres of 132 kV transmission lines and 282 kilometres of 500 kV transmission lines. There were also in service 5,424 kilometres of transmission line of 66 kV and lower voltages, and 517 kilometres of underground cable. The installed transformer capacity at the Commission's 174 substations was 28,888 MVA.

Separate systems and total State installed capacity. Several local government bodies operate their own power stations and generate a portion of their requirements which is supplemented by interconnection with the system of the Electricity Commission. Of these, the more important are the Northern Rivers County Council (installed capacity 13.1 MW), the North-West County Council (15.75 MW) and the New England County Council (57 MW). The aggregate effective capacity for the whole of New South Wales systems and isolated plants was approximately 9,880 MW at 30 June 1983, while the number of ultimate consumers at this date was 2,130,945.

Future developments

Future projects include the installation of 5,280 MW of coal-fired generating plant. Two additional 660 MW units are being installed at Eraring Power Station on the central coast and will be commissioned progressively for full commercial service over the period 1983-1984. At Bayswater Power Station, which is situated in the Hunter Valley, construction has commenced on four 660 MW units. Two 660 MW units are also planned for Mount Piper Power Station which is located on the western coalfield near Wallerawang. Commissioning of the Bayswater units is planned between 1985 and 1987 with Mount Piper to follow at a later date.

Construction of a double circuit 500 kV transmission line between Eraring and Kemps Creek, west of Sydney is complete. This transmission line is initially operating at 330 kV but operation at 500 kV is planned early in 1984. A double circuit 500 kV transmission link will be constructed from Bayswater Power Station to Mount Piper Power Station and thence to Marulan where it will be interconnected with the existing transmission system between the Snowy Mountains and Sydney.

Hydro-electricity

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area (*see* Snowy Mountains Hydro-electric Scheme, page 406). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50 MW) and Hume Dam (50 MW). In addition, there are six smaller hydro-electric installations in operation in various parts of the State. A pumped-storage hydro-electric system to produce 240 MW has been installed as part of the Shoalhaven Scheme in conjunction with the Metropolitan Water Sewerage and Drainage Board.

VICTORIA

State Electricity Commission (SEC)

The SEC is Australia's largest electricity supply authority and individual coal producer. It is a semi-government authority with the principal responsibility of generating or purchasing electricity for supply throughout Victoria. It may own, develop and operate brown coal open cuts and briquetting plants and develop the State's hydro-electric resources. It is required to meet, from its own revenue, all expenditure involved with operating its power and fuel undertakings and to provide for statutory transfers to the consolidated revenue of the State. In 1982–83 its revenue was $1,275 million. At 30 June 1983 it had total fixed assets of $4,620 million and a staff of 22,800.

The SEC was established by an Act of the Victorian Parliament in 1921 and now operates under the *State Electricity Commission Act 1958*. Since it began operating, the SEC has expanded and co-ordinated the generation, purchase and supply of electricity on a statewide basis to the stage where its system provides almost all the electricity produced in Victoria and its transmission covers almost the entire population of the State. At 30 June 1983 it distributed electricity directly to 1.363 million customers and indirectly to a further 278,000 through 11 metropolitan councils which buy power in bulk for retail distribution under franchises granted by the Victorian Government before the SEC's establishment.

Existing electricity system

The SEC Act requires the SEC to apply the natural resources of the State. Of the State's recoverable fossil fuel reserves, brown coal represents 94.6 per cent, natural gas 2.6 and oil 2.8. The SEC therefore has committed itself to increasing the proportion of total Victorian requirements met with coal-based energy.

Victoria's electricity system is based upon the State's extensive brown coal resource in the Latrobe Valley 140 to 180 km east of Melbourne in central Gippsland. It is one of the largest single brown coal deposits in the world, amounting to 108,000 megatonnes of which 35,000 are economically winnable.

The coal is young and soft with a moisture content of 60 to 70 per cent and occurs in thick seams from relatively close to the surface to a depth of several hundred metres. The coal can be won continuously in large quantities and at low cost by a specialised mechanical plant. The SEC's coal-fired power stations have been established near the coal deposits because the coal's moisture content would make the coal expensive to transport, every three tonnes of material including two tonnes of water.

The major brown coal-fired generating plants in the system are the 1,600 MW Hazelwood and 1,450 MW Yallourn 'W' power stations. Other brown coal-fired plants are Morwell (170 MW) and Yallourn 'C', 'D' and 'E' (521 MW). These stations are all located in the Latrobe Valley and generate three-quarters of the State's electricity requirement.

Other thermal stations are Jeeralang (465 MW) gas turbine station in the Latrobe Valley and Newport 'D' (500 MW) gas-fired station in Melbourne. There are hydro-electric power stations in north-eastern Victoria: Kiewa (184 MW), Dartmouth (150 MW), Eildon/Rubicon/Cairn Curran (137 MW). Victoria is also entitled to about 30 per cent of the output of the Snowy Mountains Hydro-electric Scheme and half of the output of the Hume hydro-electric station near Albury.

The SEC's total installed generating plant capacity at 30 June 1983 was 6,344 MW, including both capacity within the State and that available to it from New South Wales. In 1982 83 electricity generated by the SEC in its thermal and hydro-electric power stations and purchased totalled 25,196 GWh.

Power station construction

Construction of the Loy Yang 'A' power station complex south-east of Traralgon in the Latrobe Valley was authorised by the Victorian Government in 1976. It is the largest single engineering project undertaken in Australia. Coal-fired, Loy Yang will provide base load electricity for the Victorian grid and almost double the State's generating capacity. The project nominally comprises two 2,000 MW power stations, Loy Yang 'A' and Loy Yang 'B' in eight 500 MW units. The first unit is to come into service in 1984.

Transmission and distribution

The distribution of electricity throughout Victoria has been completed, except for some isolated and remote areas of the State. Main transmission is by 500, 330, 220 and 66 kV transmission lines which supply the principal distribution centres and interconnection between generating sources.

Three 500 kV transmission lines, Australia's first, and six 220 kV lines link the Latrobe Valley stations with Melbourne and the State grid while three 330 kV lines provide the interstate link, two through the Snowy scheme. Bulk distribution of power throughout the main regional areas is by 220 kV lines to terminal stations which reduce the voltage to 66 kV or 22 kV for delivery to zone substations for further distribution. Feeder lines then deliver to distribution substations which in turn reduce the voltage to 415/240 volts for reticulation to individual customers. Some big industrial concerns take power at higher voltages.

Major development of the transmission system in 1982–83 included the completion of the third 500 kV line from Hazelwood to South Morang to reinforce the system between the Latrobe Valley and Melbourne. Another major project was the completion of the 272 km 500 kV line from Geelong to Portland, the longest transmission line of its type in Australia. Two 500 kV lines, completed between Sydenham and Geelong, will meet Geelong's projected demand and, with the Geelong-Portland line, supply an aluminium smelter proposed for development at Portland.

QUEENSLAND

Organisations

The State Electricity Commission of Queensland's main functions are to plan and ensure the proper development and co-ordination of the electricity supply industry throughout the State; to enforce safety regulations; to control electricity charges; to raise capital for development and to administer the *Electricity Act* 1976-1982 which regulates the electricity supply industry in Queensland.

The Queensland Government has decided to amalgamate the functions of the Commission and the Queensland Electricity Generating Board. Enabling legislation is to be introduced as soon as possible, however, as an interim measure the Government has dissolved the Generating Board and appointed the Commission to perform the duties of that Board.

The Queensland Electricity Generating Board is responsible for generation and main transmission. It operates the State's major power stations, and supplies, via its Statewide transmission network, energy in bulk to the seven distributing boards whose responsibility it is to distribute electricity to consumers in their respective areas. These boards are The South East Queensland Electrictity Board; The South West Queensland Electricity Board; The Wide Bay—Burnett Electricity Board; The Capricornia Electricity Board; The Mackay Electricity Board; The North Queensland Electricity Board and the Far North Queensland Electricity Board.

Four of these distributing boards (The South West Queensland, The Capricornia, The North Queensland and The Far North Queensland) also operate small internal combustion stations in their respective areas.

Electricity generation, transmission and distribution

Over ninety per cent of the State's generation is derived from steam power stations fuelled by black coal. Hydro-electric stations located in North Queensland provide around 5 per cent, depending on rainfall in the catchment areas, with the balance being generated by gas turbine and diesel power stations using light fuel oil. The Roma diesel power station also uses locally produced natural gas. Electricity generated by the public supply authorities in Queensland in 1982–83 totalled 14,736 million kWh. In addition 171 million kWh were purchased in bulk from other producers of electricity for redistribution to consumers.

At 30 June 1983 the total generating capacity of the publicly-owned stations in the State was 3,614 MW, comprising 3,246 MW of steam plant, 132 MW of hydro-electric plant, 178 MW of gas turbine plant and 58 MW of internal combustion plant.

The following table lists the regional locations, types and capacities of major publicly-owned power stations in Queensland.

QUEENSLAND POWER STATIONS—CAPACITY AND TYPE, 30 JUNE 1983

(*Source*: Department of Resources and Energy)

Location	*Type*	*Capacity (MW)*
SOUTHERN REGION		
Swanbank A	Steam	396
Swanbank B	Steam	480
Swanbank C	Gas turbine	30
Tennyson	Steam	240
Bulimba	Steam	180
Middle Ridge	Gas turbine	60
Tarong	Gas turbine	15
CENTRAL REGION		
Gladstone	Steam	1,650
Gladstone	Gas turbine	14
Callide	Steam	120
Rockhampton	Gas turbine	25
NORTHERN REGION		
Kareeya	Hydro	72
Barron Gorge	Hydro	60
Collinsville	Steam	180
Mackay	Gas turbine	34

The electrical transmission and distribution system within the State comprised 133,690 circuit kilometres of electric lines and at 30 June 1983 supplied approximately 909,000 customers. The main transmission voltages are 275 kV, 132 kV, 110 kV, 66 kV and in certain areas 33 kV and 22 kV. The single wire earth return system is used extensively in rural electrification and 38,128 kilometres of line for this system of distribution was in service at 30 June 1983.

Future development

There are four major generation projects being developed and under construction in Queensland and when completed will provide a sound basis for ensuring adequate electricity supply for the State into the next decade.

The Wivenhoe Pumped Storage Hydro Electric project when completed in 1984 will consist of two 250 MW pump/turbine generating units, 107 route kilometres of 275 kV transmission lines and one substation with a total transformer capacity of 624 MVA.

The Tarong Power Station will consist of four 350 MW generating units and the expected commissioning dates for each of the four sets are May 1984, May 1985, February 1986 and November 1986. Included with the project is a 15 MW gas turbine generating unit which was commissioned in March 1983 and is now available to supply power to the system. To connect this power station to the main transmission network will require the construction of 331 route kilometres of 275 kV transmission lines and 3 substations with a transformer capacity of 2,000 MVA.

The Callide "B" Power Station, expected to be completed by 1989, will consist of two 350 MW generating units and its connection to the central grid will involve the construction of 290 route kilometres of 275 kV transmission lines and installation of transformers with a capacity of 800 MVA.

The fourth power station is to be sited at Stanwell (24 km south-west of Rockhampton) and may be required to produce energy as early as 1989. The power station will consist of four 350 MW generating units and will necessitate construction of almost 400 kilometres of 275 kV transmission line.

SOUTH AUSTRALIA

Electricity Trust of South Australia

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly-formed public authority, the Electricity Trust of South Australia, which became responsible for unification and coordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897–1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority; arrange, by agreement with other organisations which generate or supply electricity, to inter-connect the mains of the Trust with those of other organisations; and give or receive supplies of electricity in bulk.

Capacity and production

Of the total installed capacity in South Australia at 30 June 1982, the Electricity Trust operated a plant with a capacity of 2,090 MW, making it the most important authority supplying electricity in the State. There were approximately 576,000 ultimate consumers of electricity in the State, of whom 566,874 were supplied directly and approximately 9,000 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne (240 MW), Port Augusta Playford 'A' (90 MW) and Playford 'B' (240 MW), and Torrens Island (1,280 MW). The Trust also operates a turbo-generator station at Dry Creek (156 MW), a small station at Port Lincoln (9 MW), and one at Snuggery (75 MW).

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Playford power stations at Port Augusta and natural gas from the Gidgealpa-Moomba field for the Torrens Island and Dry Creek stations.

WESTERN AUSTRALIA

State Energy Commission of Western Australia

On 1 July 1975 the Government of Western Australia combined the State Electricity Commission and the Fuel and Power Commission to form a new organisation known as the State Energy Commission of Western Australia. The Commission is specifically charged with the responsibility for ensuring the effective and efficient utilisation of the State's energy resources and for providing its people with economical and reliable supplies of electricity and gas.

The Commission owns and operates four major thermal power stations. These are located at Kwinana, Muja, South Fremantle and Bunbury and all use local coal to produce electricity. Kwinana power station also has the capacity to burn oil or natural gas. A small hydro-electric station is situated at Wellington Dam near Collie, and there are gas turbine generating units at Geraldton and Kwinana.

Power from the four major stations is fed to an interconnected grid system which supplies the electricity needs of 98 per cent of the State's population. The grid services the metropolitan area and the South West and Great Southern areas, including an area extending to Koolyanobbing and northwards as far as Kalbarri, some 100 km north of Geraldton.

In areas too remote to utilise the interconnected grid system, diesel power stations are used. The Commission owns and operates 10 of these diesel stations. Of the remaining stations, 22 are owned by local authorities but operated by the Commission under the Country Towns' Assistance Scheme (CTAS).

The CTAS was introduced when steeply rising oil prices in the 1970s caused dramatic increases in country electricity prices. Under this scheme, the Commission operates the electricity undertakings but ownership remains with the shires which are required to raise the funds needed for capital works, including generating plant, distribution extensions and upgrading.

In areas supplied with power through the interconnected grid, or Commission owned and/or operated diesel power stations, uniform tariffs apply.

At 30 June 1983 the Commission's generating capacity from its interconnected grid system was 1782 MW, while the capacity of its supply system in country areas was 98.58 MW.

TASMANIA

A considerable part of the water catchment in Tasmania is at high level. The establishment of numerous dams has created substantial artificial storage which has enabled the State to produce energy at a lower cost than elsewhere in Australia and in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. Abundant and comparatively cheap supplies of electricity played an important role in attracting industry to Tasmania. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, *see* Year Book No. 39, pages 1192–3.

Hydro-Electric Commission

The Commission was created in 1930, taking over the activities of the Hydro-Electric Department and the existing small hydro-electric installations. Development initially concentrated on hydro-electric generation feeding into a State-wide power grid (King Island from 1951 and Flinders Island from 1968 are outside the grid and are supplied by diesel generators). Unusually low rainfall during 1967 severely restricted the State's generating capacity and prompted the construction of a substantial oil-fired thermal station with a capacity of 240 MW. This station, completed during 1974, is used as required.

Output and capacity of hydro-electric system

At 30 June 1983 the generating system had an average capacity, with maximum thermal generation, of 9,478 MWh/year. The approved remaining works at the Pieman River Power Development, scheduled for completion in 1986, will increase the system average capacity to 10,486 MWh/year, with maximum thermal generation.

Work began in 1982-83 on the Gordon River Power Development Stage 2 but was halted by the Federal government refusing consent for the project to proceed.

The Hydro-Electric Commission in August-September 1983 began work on two smaller hydro power schemes in Western Tasmania. These are the Anthony Power Development scheduled for completion in 1990 and the King River Power Development which is expected to be commissioned a year later. They will add about 116 MW to the installed generating capacity, and will together produce about 980 MWh of electricity in an average year.

AUSTRALIAN CAPITAL TERRITORY

The supply authority is the A.C.T. Electricity Authority which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929. The Authority electric supply requirements are met by a Snowy Mountains reservation of 670 GWh and the balance provided by the Electricity Commission of New South Wales. The locally-owned plant consists of 3 MW diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1983 was 85,792. During the year 1982–83 the bulk electricity purchased was 1,600 GWh and the system maximum demand was 475 MW.

NORTHERN TERRITORY

The Northern Territory Electricity Commission is a Statutory Authority operating under the *Northern Territory Electricity Act* 1978 (as amended to date), with responsibility for generation, distribution, transmission and sale of electricity in the Northern Territory. The Commission's responsibilities also include electrical safety and inspections.

In Darwin, the major electricity supply source is Stokes Hill Power Station, with an installed capacity of 141 MW, and standby gas turbines are located at Berrimah and Snell Street, with a combined capacity of 40 MW.

In the major centres of Alice Springs, Tennant Creek and Katherine, diesel power stations generate power with a capacity of 36.76 MW (Alice Springs), 7.8 MW (Tennant Creek) and 14.36 MW (Katherine). As additional sets are being installed at Alice Springs, provision is being made for dual firing in view of the forthcoming supply of natural gas from Palm Valley.

A new power station at Yulara (Ayers Rock Tourist Village) was commissioned in September 1982 with an installed capacity of 2.6 MW. Tennant Creek's total capacity rose to 9.6 MW in October 1982 with the installation of a sixth set.

The Commission operates a number of smaller diesel stations, by an agency arrangement, in the following smaller townships—Pine Creek (.95 MW), Elliott (.536 MW), Mataranka (.4 MW), Larrimah (.2 MW), Ti Tree (.318 MW), Borroloola (.56 MW), Newcastle Waters (.116 MW) and Timber Creek (.2 MW). An advanced coal-fired power station with a planned capacity of 300 MW is being constructed on Channel Island, 45 km from Darwin. When completed in 1988, this station will be interconnected with Katherine and the smaller communities presently using diesel generation.

Many small communities in the Territory generate their own power using diesel fired conventional generating sets. The Department of Transport and Works has responsibility for the installation and maintenance of power generation in Aboriginal settlements, which comprise the greater majority of these small outlying communities.

Electricity and gas establishments

The census of electricity and gas industries covers distribution as well as production and is conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards thereby allowing comparative analysis between and across different industry sectors. The results of this census are therefore comparable with economic data collections undertaken annually for the mining and manufacturing industries and periodically for the wholesale trade, retail trade and construction industries.

The following table shows a summary of operations of electricity and gas establishments for 1981–82. Further details are available in the publication *Electricity and Gas Establishments: Details of Operations, Australia, 1981-82* (8208.0)

ELECTRICITY AND GAS ESTABLISHMENTS—SUMMARY OF OPERATIONS, 1981–82

State or Territory	*Establishments at 30 June*	*Employment at 30 June*			*Wages and salaries ($m)*	*Turnover ($m)*	*Stocks*		*Purchases, transfers in and selected expenses ($m)*	*Value added ($m)*	*Fixed capital expenditure less disposals ($m)*
		Males (No.)	*Females (No.)*	*Total (No.)*			*Opening ($m)*	*Closing ($m)*			
New South Wales—											
Electricity	34	28,206	2,953	31,159	567,900	2,874,142	164,958	281,200	1,586,617	1,403,766	477,820
Gas	21	2,562	612	3,174	47,947	259,764	12,667	16,158	141,687	121,567	30,300
Queensland—											
Electricity	11	11,095	1,481	12,576	216,232	1,178,642	63,805	75,672	622,303	568,207	502,043
Gas	7	613	108	721	10,194	63,454	7,141	6,834	33,482	29,665	19,024
Other States— and Territories (a)—											
Electricity	40	35,404	2,823	38,227	703,683	2,747,947	153,641	123,796	1,152,914	1,615,188	1,387,584
Gas	6	5,596	850	6,446	112,784	599,926	24,847	26,054	227,517	373,617	111,088
Australia—											
Electricity	85	74,705	7,257	81,962	1,487,815	6,800,731	382,404	530,668	3,361,834	3,587,161	2,367,447
Gas	34	8,771	1,570	10,341	170,925	923,144	44,655	49,046	402,686	524,849	160,412

(*a*) Includes Victoria, South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory. At the end of June 1982 the number of establishments were: Victoria—electricity 14, gas 1; South Australia—electricity 13, gas 2; Western Australia— electricity 8, gas 2; Northern Territory—electricity 2 and Australian Capital Territory—electricity 1.

National Energy Survey

In June 1983 a survey was conducted throughout Australia to obtain information about the number and type of selected domestic appliances held by households. It was undertaken as part of the regular population survey which is based on a multi-stage area sample of private dwellings (houses, flats, etc) and non-private dwellings (hotels, motels, etc) and covers about two-thirds of one per cent of the population of Australia. For the purposes of the National Energy Survey certain types of dwellings, such as non-private dwellings, caravan parks and dwellings occupied by more than one household, or diplomatic personnel or persons from overseas holidaying in Australia, were excluded.

The following table shows households by major appliances and facilities. Further data relating to the National Energy survey are published in *National Energy Survey: Household Appliances, Facilities and Insulation, Australia, June 1983* (8212.0)

HOUSEHOLDS BY MAJOR APPLIANCES AND FACILITIES, JUNE 1983

('000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Refrigerator—									
One door (*a*)	787.5	685.6	326.6	212.1	210.7	85.7	14.7	31.8	2354.6
Two door (*a*)	735.7	474.1	321.9	182.8	159.5	44.4	13.0	36.0	1967.4
Combination	230.9	128.5	129.7	67.7	64.3	7.5	5.3	6.1	640.0
Total	*1754.0*	*1288.2*	*778.3*	*462.6*	*434.5*	*137.6*	*33.0*	*73.9*	*4962.0*
Freezer—									
Top opening	538.9	393.6	291.5	157.1	137.3	70.2	13.5	21.4	1623.4
Front opening	236.5	161.1	91.9	81.7	64.9	13.9	6.0	11.2	667.2
Total	*775.4*	*554.7*	*383.4*	*238.8*	*202.2*	*84.2*	*19.5*	*32.5*	*2290.7*
Oven	1744.0	1282.6	770.2	460.7	431.5	137.3	33.2	73.7	4933.1
Hotplates	1722.3	1261.3	758.4	459.8	424.5	134.9	33.2	73.9	4868.3
Microwave oven (*b*)	228.8	84.2	74.3	34.7	56.1	6.7	3.6	10.0	498.4
Electric frypan/skillet (*b*)	680.3	382.5	377.4	187.2	156.5	69.4	12.1	29.8	1895.3
Vertical grill (*b*)	134.7	78.4	46.8	39.8	24.7	11.1	1.8	5.4	342.6
Crockpot (*b*)	107.5	53.9	52.2	31.4	27.9	6.7	3.4	6.1	289.1
Dishwasher	308.3	246.5	142.3	53.8	57.0	18.6	5.9	21.7	854.1
Washing machine—									
Automatic	1196.5	893.9	493.3	249.0	261.5	82.2	27.0	61.2	3264.7
Other	406.8	270.2	237.3	186.6	139.8	52.0	4.6	8.4	1305.6
Total	*1603.3*	*1164.1*	*730.6*	*435.6*	*401.3*	*134.2*	*31.5*	*69.7*	*4570.3*
Clothes drier—									
Rotary	762.5	591.4	306.4	180.6	122.5	72.1	10.3	36.3	2082.1
Cabinet	70.9	43.8	11.1	24.7	8.8	5.2	*	2.1	167.2
Total	*833.4*	*635.2*	*317.6*	*205.3*	*131.3*	*77.2*	*10.9*	*38.4*	*2249.3*
Hotwater system—									
Shared	46.8	35.4	15.1	4.4	3.1	*	*	*	107.5
Non-shared	1688.7	1249.0	746.7	454.0	428.1	135.6	32.1	72.6	4806.8
Total	*1735.5*	*1284.4*	*761.8*	*458.4*	*431.2*	*136.3*	*32.7*	*74.0*	*4914.3*
Main heating—									
Central	13.2	168.1	*	2.3	*	3.6	*	5.6	195.9
Oil	128.0	95.4	18.5	47.3	56.4	20.7	*	12.6	380.2
Electric	1084.8	295.2	395.3	197.8	132.6	48.7	2.2	47.4	2204.0
Gas	173.5	717.4	10.4	113.5	66.7	7.2	*	4.2	1093.3
Woodfire/solid fuel	193.4	150.4	38.7	75.8	93.0	59.6	*	7.8	619.7
No heating	70.8	5.6	223.9	6.2	32.5	*	28.6	*	368.0
Air-conditioning	518.5	472.4	124.9	291.2	161.5	1.2	19.7	17.7	1607.0
Wall insulation (*c*)	165.0	211.9	67.9	41.0	18.6	19.9	2.9	10.3	537.5
Ceiling insulation (*c*)	608.5	695.9	119.2	248.4	159.9	53.1	11.1	48.5	1944.6
Swimming pool—									
With filter	198.6	117.1	75.5	32.8	51.3	6.0	5.3	5.4	492.0
No filter	3.9	6.0	*	*	*	*	*	—	13.4
Total	*202.5*	*123.1*	*77.1*	*33.4*	*51.8*	*6.7*	*5.5*	*5.4*	*505.4*
Total households	**1762.2**	**1293.9**	**780.5**	**463.5**	**435.6**	**138.0**	**33.3**	**74.0**	**4981.1**

(*a*) Refers only to external doors. (*b*) Included only if used more than once a week. (*c*) Excludes households in flats and mobile and improvised dwellings. * Subject to sampling variability too high for most practical uses.

BIBLIOGRAPHY

ABS Publications

Directory of ABS Energy Statistics (1107.0).

Other Publications

Other organisations which produce statistics in this field include the Department of Resources and Energy, the Joint Coal Board, the Australian Institute of Petroleum, the Electricity Supply Association of Australia and the Bureau of Mineral Resources, Geology and Geophysics. State Government departments and instrumentalities also are important sources of energy data, particularly at the regional level, while a number of private corporations and other entities operating within the energy field also publish or make available a significant amount of energy information.

CHAPTER 19

HOUSING AND CONSTRUCTION

This chapter gives details of: the characteristics of dwellings obtained from censuses (pages 417-8); government activities in the field of housing (pages 418-30); financial arrangements associated with the erection or purchase of homes (pages 430-2); a summary of building activities (pages 433-7); summary of construction (other than building) activities (pages 437-9); and summary of construction industry statistics (pages 439-42).

Details of some other Government housing and accommodation assistance are provided in Chapter 9 'Social Security and Welfare' including Aged or Disabled Persons Homes, Handicapped Persons Assistance, Homeless Persons Assistance and Youth Services Scheme.

HOUSING

Census dwellings

Further information on dwellings obtained from censuses is available in the detailed tables of the publications issued for each individual census. A list of the 1981 Census publications is shown in the ABS *Catalogue of Publications, Australia* (1101.0). The most relevant 1981 census publication is *Summary Characteristics of Persons and Dwellings* (2435.0 2443.0). More detailed dwellings information is available on microfiche. Tables are listed in the *Catalogue of 1981 Census Tables* (2139.0).

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building, and includes, in addition to houses and self-contained flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1981 Census, together with information from earlier censuses.

Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1947 to 1981. Occupied dwellings are classified into 'private' and 'non-private' dwellings.

Private dwellings were classified by the census collector for the 1981 Census; collectors allocated each dwelling to one of the following categories:

Separate house
Semi-detached house
Row or terrace house
Medium density housing
Flat over three storeys
Caravan, houseboat, etc.
Improvised home
House or flat attached to a shop, office, etc.

Non-private dwellings include hotels, motels, boarding houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, caravan parks, staff barracks and quarters, etc.

An unoccupied dwelling is defined as a structure built specifically for private living purposes and which is habitable though unoccupied at the time of the Census. The total number of unoccupied dwellings shown for any area does not represent the number of vacant dwellings available for sale or renting.

DWELLINGS(*a*): AUSTRALIA, CENSUSES, 1947 TO 1981

Census	*Occupied*			*Unoccupied*
	Private	*Non-private*	*Total*	
1947	1,873,623	34,272	1,907,895	47,041
1954	2,343,421	36,932	2,380,353	112,594
1961	2,781,945	35,325	2,817,270	194,114
1966	3,155,340	33,917	3,189,257	263,873
1971	3,670,553	24,006	3,694,559	339,057
1976	4,140,521	21,543	4,162,064	431,200
1981	4,668,909	22,516	4,691,425	469,742

(*a*) Excludes dwellings occupied solely by Aboriginals before 1966.

The total number of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1976 and 1981 were as follows:

DWELLINGS: CENSUSES, 1976 AND 1981

State or Territory	*Census 30 June 1976*		*Census 30 June 1981*	
	Occupied(a)	*Unoccupied*	*Occupied(a)*	*Unoccupied*
New South Wales	1,499,001	152,960	1,669,596	153,251
Victoria	1,126,304	119,592	1,243,453	124,522
Queensland	602,426	62,686	703,964	83,366
South Australia	392,253	39,768	433,841	42,407
Western Australia	339,105	34,064	405,999	42,100
Tasmania	122,573	15,786	136,269	17,765
Northern Territory	23,270	2,292	29,563	2,368
Australian Capital Territory . .	57,132	4,052	68,740	3,963
Australia	**4,162,064**	**431,200**	**4,691,425**	**469,742**

(*a*) Includes non-private dwellings.

Commonwealth Government and Housing

Commonwealth Government activities in the housing field have, in the main, included the provision of financial assistance to State Governments under various agreements; assistance to young married couples under the Home Savings Grant Act and the Home Deposit Assistance Act; financial assistance to defence (and eligible ex-service) personnel in the erection and purchase of homes; the operations of the Housing Loans Insurance Corporation; assistance in the provision of accommodation for the aged, Aboriginals and other groups in need and the provision of housing in the Territories. In 1981–82, the Commonwealth also introduced a Crisis Accommodation For Families Program and a Mortgage and Rent Relief Scheme was introduced during 1982–83. In addition, the Commonwealth announced a further $100m under the *Special Employment-Related Programs Act* 1982 (wage pause savings) to be made available during the 1983 calendar year for the construction of public housing.

Home Savings Grant Scheme

The Home Savings Grant Scheme terminated on 2 June 1982 following Royal Assent to the Home Deposit Assistance Act. Terminating legislation specified that applications made under the Homes Savings Grant Act 1964, be lodged by this date (viz 2 June 1982) and that under the Homes Savings Grant Act 1976 grants be paid only to people who applied, or who notified in writing their intention to apply, by 2 July 1982. Those people who notified by that date their intention to apply had a further month, to 2 August 1982, in which to lodge their application.

Home Deposit Assistance Scheme

The *Home Deposit Assistance Scheme* was introduced in 1982 with retrospective effect to 18 March 1982. Persons acquiring their first home on or after 18 March 1982 and before 1 October 1983 may qualify under the *Home Deposit Assistance Act* 1982. Applications for grants may be made by persons who contract to buy or build or commence to construct their first home in Australia. There is no restriction on the marital status or age of the applicant except that persons under sixteen years of age must be married or engaged. The home must be intended as the applicant's principal place of residence. Persons who are not Australian citizens must have the right to reside here permanently. Applicants cannot have owned a home or received a previous grant under either the Home Deposit Assistance Act or Home Savings Grant Act.

For people acquiring their first home up to and including 31 July 1983, the amount of grant is related to the 'savings period'—the period of one or two complete years immediately before the contract date during which the applicant must have saved in an acceptable form. In this case the grant is calculated on the basis of a dollar for each dollar of acceptable savings, including savings held at the beginning of the savings period. A maximum grant of $1,250 is payable in respect of a savings period of one complete year and $2,500 for a two year savings period. For people acquiring their first home on or after 1 August 1983, this savings requirement does not apply.

An income limit applies based on the combined taxable income of all applicants including breadwinner and spouse. For persons acquiring their homes between 18 March 1982 and 30 June 1982 a full grant may be paid, if combined taxable income for 1980–81 does not exceed $18,900. If income exceeds that figure a partial grant, reduced proportionately, may be payable for combined taxable income up to $21,700. For persons acquiring their homes between 1 July 1982 and 30 June 1983, combined taxable income for 1981–82 must not exceed $21,700 to be eligible for a full grant. If the income exceeded that figure a partial grant may be payable for combined taxable income up to $24,900. For persons acquiring their homes between 1 July 1983 and 30 September 1983, combined taxable income for 1982-83 must not exceed $24,300 to be eligible for a full grant. If the income exceeded that figure a partial grant may be payable for combined taxable income up to $27,900. If, in the twelve months preceding home acquisition, an applicant has withdrawn from the workforce, or is earning less income, these and other special circumstances may be taken into account when testing income.

A person who is eligible for a grant may also be eligible for a Family Bonus. For families with one dependent child, $500 is payable and for families with two or more dependent children $1,000 is payable. A family with a child or children born or adopted up to 11 months after home acquisition may qualify. A dependent child includes a student aged 16–25.

The Family Bonus does not vary with the level of savings or the amount of income provided the maximum income limits are not exceeded.

First Home Owners Scheme

It was announced in May 1983 that the First Home Owners Scheme would commence in October 1983. Applications for assistance under the *First Home Owners Act* 1983 may be made by persons who contract to buy or build or who commence to construct their first home in Australia on or after 1 October 1983. There is no restriction on the marital status or age of the applicant. The home must be intended as the applicant's principal place of residence. At least one applicant must be an Australian citizen or must have the right to reside here permanently. Applicants cannot have owned a home in Australia or previously received assistance under the First Home Owners Scheme, or a grant under the Home Savings Grant Scheme or Home Deposit Assistance Scheme.

An applicant without dependent children may receive up to $5,000 in assistance over five years. An applicant with one dependent child may receive assistance up to $6,500 over five years. An applicant with two or more dependent children may receive assistance up to $7,000 over five years. A dependent child includes a child born or adopted up to 11 months after home acquisition and also includes a student aged 16-25. All assistance is non-repayable and tax-free.

The amount of assistance payable relates directly to the amount of taxable income of all applicants, including breadwinner and spouse. People acquiring their first home in the 1983–84 financial year are generally subject to an income test on their 1982–83 taxable income (viz the year before home acquisition). If requested by the applicant, income for the current financial year may be tested. New arrivals will be tested against income in the first full year as a taxpayer.

Income limits on taxable income for the 1982-83 financial year are:

- full assistance for incomes up to $24,300;
- partial assistance for incomes up to $27,900;
- no assistance is payable on incomes above $27,900.

MAXIMUM AVAILABLE ASSISTANCE AND OPTIONS ARE:

Benefit options	*No dependants*	*One dependant*	*Two or more dependants*
	$	$	$
Option 1			
Subsidy only	5,000	6,500	7,000
Option 2			
Subsidy	3,000	4,500	4,500
Lump sum	1,500	1,500	2,000
Option 3			
Subsidy	1,750	2,750	2,750
Lump sum	2,500	3,000	3,500

Children born or adopted up to 11 months after home purchase may be included as dependants.

The subsidy is paid monthly, generally over five years, and into a financial institution account. The lump sum is paid with the first monthly payment or, where requested, by early direct payment for deposit assistance or for settlement.

During the five year subsidy period the home must continue to be the applicant's principal place of residence. The subsidy will cease upon the sale of the home, but may recommence if a subsequent home is acquired within 12 months of the sale of the first home.

Details of the First Home Owners Scheme are available in a leaflet and can be obtained through the Department of Housing and Construction or from most savings institutions and estate agents.

Operations

Particulars of applications received during 1982–83 and from inception in respect of both Schemes, are set out below:

HOMES SAVINGS GRANT ACT 1976: OPERATIONS 1982–83

	N.S.W.	*Vic.*	*Qld*	*S.A.(a)*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
Applications received	7,190	6,134	4,559	1,369 (335)	3,606	726	409	23,993
Applications approved	13,275	13,712	8,333	4,248 (380)	6,237	1,228	848	47,881
Grants approved $	18,001,004	19,592,516	11,129,009	5,591,528 (518,936)	7,046,390	1,522,655	1,104,494	63,987,596
Expenditure from Consolidated Revenue $	17,996,073	19,969,381	11,129,009	5,594,448 (518,936)	7,071,625	1,607,082	1,134,037	64,501,655

(*a*) includes Northern Territory—N.T. amount in brackets.

HOMES SAVINGS GRANT ACT 1976: OPERATIONS 1 JANUARY 1977—30 JUNE 1982

	N.S.W.	*Vic.*	*Qld*	*S.A.(a)*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
Applications received	97,854	96,202	47,689	33,308 (1,232)	31,442	10,718	7,581	324,794
Applications approved	86,256	88,664	43,655	30,915 (973)	28,823	10,119	7,271	295,703
Grants approved $	98,361,966	113,021,323	54,007,477	36,636,185 (1,282,482)	31,884,241	11,959,610	8,402,225	354,273,027
Expenditure from Consolidated Revenue $	98,272,228	112,951,144	54,007,477	36,637,158 (1,282,482)	31,868,522	11,959,610	8,402,225	354,098,369

(*a*) includes Northern Territory—N.T. amount in brackets.

HOME DEPOSIT ASSISTANCE ACT 1982: OPERATIONS 1982–83

	N.S.W.	*Vic.*	*Qld*	*S.A.(a)*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
Applications received	10,156	17,571	6,691	6,378 (324)	6,031	1,955	1,141	49,923
Applications approved	6,433	12,402	5,027	5,249 (206)	4,856	1,618	1,026	36,611
Grants approved $	15,611,136	30,630,495	12,203,747	12,520,434 (475,815)	11,459,206	3,786,991	2,484,819	88,696,828
Expenditure from Consolidated Revenue $	14,635,926	29,163,161	12,203,747	12,520,434 (475,815)	11,221,530	3,786,991	2,412,772	85,944,561

(*a*) includes Northern Territory—N.T. amount in brackets.

HOME DEPOSIT ASSISTANCE ACT 1982: OPERATIONS 18 MARCH 1982—30 JUNE 1983

	N.S.W.	*Vic.*	*Qld*	*S.A.(a)*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
Applications received	10,160	17,780	7,229	6,487 (326)	6,090	2,023	1,173	50,942
Applications approved	6,437	12,405	5,030	5,252 (207)	4,859	1,625	1,028	36,636
Grants approved $	15,622,260	30,640,995	12,213,391	12,528,684 (478,065)	11,469,206	3,805,496	2,490,436	88,770,468
Expenditure from Consolidated Revenue $	14,647,050	29,173,661	12,213,391	12,528,684 (478,065)	11,231,530	3,805,496	2,418,389	86,018,201

(*a*) includes Northern Territory—N.T. amount in brackets.

Commonwealth Government—State Housing Agreements 1945–1981

There have been several Commonwealth-State Housing Agreements (CSHAs) since 1945. (Details of the 1978 Agreement and the 1979 Commonwealth-Northern Territory Housing Agreement are contained in Year Book No. 66, pages 454, 457). In addition, the *States Grants (Housing) Act* 1971 made provision for payment of a housing grant to the States amounting to $5.5m annually and the *Housing Assistance Act* 1973 authorised special advances to States of $6.55m in 1972–73 for rental housing.

1981 Housing Agreement (Schedule 1 to the *Housing Assistance Act* 1981)

This Agreement between the Commonwealth, the six States and the Northern Territory is the latest in the series of Agreements. It applies to the five years from 1 July 1981 to 30 June 1986. Financial assistance under the Agreement comprises 'untied' loans, grants earmarked for housing for pensioners and Aboriginals and 'untied' grants. Each State decides on the allocation of 'untied' funds between home purchase and rental housing assistance and is required to match these funds on a $1 for $1 basis with funds provided from its own resources. Commonwealth loans to the States are repayable over 53 years at an annual interest rate of 4.5 per cent.

The Commonwealth has guaranteed a minimum level of funding of $200m for each year of the Agreement. Additional funding for each year is determined in the Budget context. Total funding under the Agreement in 1982–83 was $332.9m: $146m in 'untied' loans and the remainder as grants, of which $32m was allocated for housing for pensioners, $34.2m for housing for Aboriginals and $120.7m was 'untied'. In addition, in 1982–83 each State was permitted to nominate additional funds for public housing from its Works and Housing Program, subject to providing from its own resources the same amount as in 1981–82. A total of $145.9m was nominated by the States. These additional funds were provided at concessional CSHA loan terms and conditions i.e. interest rate of 4.5 per cent with principal repayable over 53 years.

Total funding under the Agreement in 1983–84 is $500m: $146m in 'untied' loans and the remainder as grants, of which $32.0m is allocated for pensioners and $52m for Aboriginals, and $270m is 'untied'. States are again able to nominate additional funds for public housing on concessional terms subject to their matching 'untied' Commonwealth assistance on a dollar for dollar basis from their own resources.

Home Purchase Assistance

Funds available in the Home Purchase Assistance Account, comprising Commonwealth funds, revolving funds arising from the operation of previous home purchase programs and State funds, are used principally to make loans to co-operative housing societies and approved State lending authorities for on-lending to home purchasers. The annual interest rate charged by a State to societies and approved lending authorities is to be not less than 5 per cent per annum in the first full financial year, increasing by 0.5 per cent per annum each year until a rate equivalent to 1 per cent below the current Commonwealth Savings Bank rate for housing loans is reached, and thereafter varying with movements in this rate. Eligibility conditions are set by each State, but loans may only be made to those who cannot obtain mortgage finance on the open market, or from other sources. Provision is made in the Agreement for a number of flexible lending practices, such as escalating interest loans with income geared starts.

Rental Housing Assistance

Available funds, comprising Commonwealth funds, internally generated funds arising from the operation of rental housing programs and State contributions, are used principally for the provision of rental housing by State housing authorities but may be used for other purposes such as urban renewal, funding of voluntary housing management groups, and allocations to local government bodies to provide rental housing. Each State determines eligibility for rental housing subject only to the condition that assistance is directed to those most in need. The level of rent is also fixed by each State and a policy of progressive movement to full market rents over the life of the Agreement is to apply in each State. Rental rebates are granted to those tenants who cannot afford to pay the rent fixed.

Each State determines its own policy on sales of rental dwellings but all sales are to be at market value or replacement cost and on the basis of a cash transaction. Home purchase assistance funds can be used to finance the purchase of rental dwellings.

Housing Agreement (Servicemen)

Prior to 30 June 1971, housing for servicemen was provided under the terms of the 1956–1966 Housing Agreement which, in the main, was concerned with public housing and which expired on that date. With effect from 1 July 1971, a separate agreement was concluded between the Commonwealth and State Governments to provide for the construction of dwellings for allotment to servicemen and for improvements to existing accommodation occupied by them. Programs are negotiated annually and the full capital cost is made available by the Commonwealth in repayable, interest-bearing loans to the States.

Operations under the 1981 Housing Agreement and the Housing Agreement (Servicemen)

The following tables show Commonwealth funding under the 1981 Agreement and the Housing Agreement (Servicemen), with the results of operations during 1981–82 under the 1981 Housing Agreement .

HOUSING AGREEMENT: HOUSING FUNDS 1981–82

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
			($'000)					
Commonwealth loans to States for housing—								
Rental Housing Assistance	31,824	36,135	–	5,761	6,519	5,464	–	85,704
Home Purchase Assistance Program	13,639	–	14,148	15,000	6,519	3,500	7,490	60,296
Commonwealth Grants to States								
Pensioners—								
Rental Assistance	12,430	7,447	5,009	3,033	2,589	992	500	32,000
Aboriginal—								
Rental Assistance	9,087	2,522	6,628	3,810	7,225	527	4,401	34,200
Untied—								
Rental Assistance	15,570	12,375	4,845	7,110	4,465	2,570	2,565	49,500
Untied Home Purchase Assistance	–	–	–	–	–	500	–	500
Housing Agreement (Servicemen) loans (*a*)	1,159	–	1,500	270	–	75	–	3,004

HOUSING AGREEMENT: HOUSING FUNDS 1981-82—*continued*

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
			($'000)					
NUMBER OF DWELLINGS: 1981 HOUSING AGREEMENT								
Rental Housing Assistance Program—								
Commenced	1,456	899	545	1,815	548	553	568	6,384
Completed	2,179	1,237	702	1,220	539	698	526	7,101
Under construction at 30 June 1982	1,337	821	330	1,091	194	301	371	4,445
Purchased	21	346	78	445	3	7	1	901
Sold	270	545	120	259	131	129	65	1,519
Home Purchase Assistance Program—								
Purchased—								
New	695	1,197	459	400	−(*b*)	10	106	6,908
Other	603		686	1,926	314(*b*)	307	−205	
New construction—								
Approved	215	147	789	516	129(*b*)	64	179	2,039
Commenced	447	n.a.	859	n.a.	129(*b*)	72	n.a.	n.a.
Completed	466	n.a.	924	n.a.	129(*b*)	73	n.a.	n.a.

(*a*) All loans were for upgrading of existing dwellings. (*b*) Excludes loans provided through private finance institutions with Government interest subsidy.

1981 HOUSING AGREEMENT: HOUSING FUNDS 1982–83

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
			($'000)					
Commonwealth loans to States for housing—								
Rental Housing Assistance	32,208	36,333	–	4,833	6,492	7,896	–	87,762
Home Purchase Assistance Program	13,804	–	15,131	15,000	6,492	511	7,300	58,238
Commonwealth Grants to States—								
Pensioners—Rental Assistance	12,171	7,371	5,138	3,080	2,731	1,009	500	32,000
Aboriginal—Rental Assistance	9,088	2,527	6,626	3,815	7,222	518	4,404	34,200
Untied—Rental Assistance	36,826	28,818	13,819	15,288	10,477	4,556	8,038	117,822
Untied—Home Purchase Assistance	–	–	–	–	–	2,889	–	2,889
Housing Agreement (Servicemen) loans (*a*)	4,610	467	2,440	–	746	19	–	8,282

(*a*) All loans were for upgrading of existing dwellings.

Rental Assistance for Pensioners, Aboriginals and Other Persons in Need

From 1 July 1981, grants have been provided to the States and the Northern Territory for rental housing assistance for pensioners, Aboriginals and other persons in need under the 1981 Housing Agreement. In previous years, such grants were provided under separate arrangements, as described in earlier issues of the Year Book.

Grants may be used for purposes other than construction of housing, eg leasing from the private sector.

To 30 June 1982, grant payments earmarked for pensioners totalled $175,240,000. The number of units provided to 30 June 1982 amounted to 11,333.

Earmarking of grants for Aboriginal housing commenced in 1979 80, with $21.06m being paid in 1979 80 and $22.1m in 1980–81 and $34.2m in 1981–82. During those three years 2018 dwellings were programmed for, including the upgrading of existing dwellings. The States Grants for Aboriginal housing program, previously administered by the Department of Aboriginal Affairs was amalgamated with the Housing Agreement grants earmarked for Aboriginals as from 30 June 1981.

RENTAL ASSISTANCE TO PENSIONERS, ABORIGINALS AND OTHER PERSONS IN NEED

		N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Number of units provided									
1978-79	Pensioners	460	230	173	81	77	26	—	1,047
1979-80	Pensioners	652	246	220	284	150	50	n.a.	n.a.
	Aboriginals	136	58	202	44	118	20	n.a.	n.a.
1980-81	Pensioners	540	275	208	342	137	59	n.a.	n.a.
	Aboriginals	140	51	176(*a*)	47	117	14	n.a.	n.a.
1981-82	Pensioners	324	250	220	591	135	34	n.a.	n.a.
	Aboriginals	122	50	175	76	453(*b*)	19	n.a.	n.a.
Grants Paid ($'000)									
1978 79	Pensioners	5,695	3,388	2,050	1,343	1,086	438	—	14,000
1979-80	Pensioners	12,132	7,186	4,495	2,856	2,361	970	1,590	31,590
	Aboriginals	6,000	2,000	6,100	1,500	4,000	400	1,060	21,060
	Untied	16,410	13,045	5,105	7,495	4,710	3,235	2,650	52,650
1980-81	Pensioners	12,421	7,409	4,790	2,945	2,459	976	1,650	32,650
	Aboriginals	6,300	2,100	6,400	1,600	4,200	400	1,100	22,100
	Untied	17,070	13,570	5,310	7,790	4,900	3,360	2,750	54,750
1981-82	Pensioners	12,430	7,447	5,009	3,033	2,589	992	500	32,000
	Aboriginals(*c*)	9,087	2,522	6,628	3,810	7,225	527	4,401	34,200
	Untied	15,570	12,375	4,845	7,110	4,465	3,070	2,565	50,000

(*a*) In addition, 18 blocks of land were purchased. (*b*) Includes upgrading of 378 existing dwellings. (*c*) After 30 June 1981, includes the States Grants for Aboriginal housing program previously administered by the Department of Aboriginal Affairs.

Defence Service Homes

The *Defence Service Homes Act* 1918 assists certain former and serving members of the Defence Force to acquire a home on concessional terms.

The Defence Service Homes Corporation is, subject to the directions of the Minister for Veterans' Affairs, responsible for the administration of the Defence Service Homes Act.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-18 and 1939-45 Wars; persons who served in the warlike operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act* 1962; and members of the Defence Force who serve on continuous full-time service and national servicemen whose periods of service ended not earlier than 7 December 1972 and who meet certain prescribed conditions. The categories of eligible persons also include the widows and, in some circumstances, the widowed mothers of eligible persons, and persons domiciled in Australia and employed in certain sea-going service during the 1914–18 and 1939–45 Wars.

During 1982–83 the following loan conditions applied:

Maximum loan	:	$25,000
Interest rates	:	3.75 per cent per annum on the first $12,000; 7.25 per cent per annum on any excess over $12,000 up to $15,000; 10.00 per cent per annum on amount in excess of $15,000
Maximum repayment period	:	The maximum repayment period permitted by the Act is 45 years or, in the case of the widow or widowed mother of an eligible person, 50 years; but, normally, the repayment period is limited to 32 years.

Operations under the Defence Service Homes Act

Since the inception of the Defence Service Homes Scheme in 1919, 377,071 loans have been granted to persons eligible for assistance under the Act. All figures shown include homes which were provided originally under the Housing Agreements with the States, and taken over in accordance with those agreements.

The following tables give details of the operations under the Defence Service Homes Act in the year 1982–83. The earliest year for which details are given in the tables is 1978 79; for earlier years *see* previous issues of the Year Book. The figures shown include operations in the Northern Territory, Norfolk Island and in Papua New Guinea.

DEFENCE SERVICE HOMES ACT: NUMBER OF LOANS GRANTED

Year	*Construction of homes*	*Purchase of new homes*	*Purchase of previously occupied homes*	*Enlargement of existing homes*	*Total*
1978–79	1,904	658	2,720	83	5,365
1979–80	1,734	566	2,846	105	5,251
1980–81	1,927	531	3,332	125	5,915
1981–82	2,694	570	3,818	203	7,285
1982–83	2,345	419	3,568	225	6,557

DEFENCE SERVICE HOMES ACT: STATE SUMMARY OF OPERATIONS

Year	*N.S.W.(a)*	*Vic.*	*Qld(b)*	*S.A.(c)*	*W.A.*	*Tas.*	*A.C.T.*	*Total*
NUMBER OF LOANS GRANTED								
1978–79	1,657	1,042	1,068	559	540	102	397	5,365
1979–80	1,751	1,111	1,039	450	474	107	319	5,251
1980–81	1,584	1,309	1,287	495	684	138	418	5,915
1981–82	1,569	1,563	2,031	709	806	198	409	7,285
1982–83	1,576	1,484	1,447	687	808	185	370	6,557
CAPITAL EXPENDITURE ($'000)								
1978–79	23,842	14,980	15,438	7,992	7,836	1,467	5,879	77,434
1979–80	25,035	15,835	15,149	6,235	6,923	1,508	4,740	75,425
1980–81	26,174	22,334	21,128	8,413	12,505	2,396	8,603	101,554
1981–82	34,350	34,710	44,690	15,318	18,537	4,362	9,723	161,690
1982–83	36,677	33,939	34,416	15,500	18,877	4,001	9,067	152,477
LOAN REPAYMENTS ($'000)								
1978–79	29,928	20,670	10,416	6,578	7,848	1,951	(*d*)	77,391
1979–80	33,425	21,865	13,062	7,361	8,359	1,951	(*d*)	86,023
1980–81	36,290	22,475	14,990	8,144	9,203	1,833	(*d*)	92,935
1981–82	29,825	22,278	14,915	7,933	8,980	2,013	(*d*)	85,944
1982–83	27,951	22,084	13,191	8,032	8,017	1,772	(*d*)	81,047
NUMBER OF LOAN ACCOUNTS AT 30 JUNE								
1979	62,255	50,192	26,093	16,131	17,540	4,152	(*d*)	176,363
1980	60,839	48,090	25,529	15,600	16,971	4,006	(*d*)	171,035
1981	58,371	46,591	25,086	15,099	16,510	3,915	(*d*)	165,572
1982	56,953	45,498	25,254	14,871	16,235	3,876	(*d*)	162,687
1983	55,949	44,473	25,476	14,649	16,246	3,856	(*d*)	160,649

(*a*) Includes A.C.T. and Norfolk Island (*b*) Includes Papua New Guinea (*c*) Includes Northern Territory (*d*) Included in New South Wales.

Mortgage and Rent Relief Scheme

Under the three-year program which began in 1982–83 the Commonwealth Government announced that it would provide up to $20m a year to the States, the Northern Territory and the Australian Capital Territory for the provision of short term assistance to low-income home buyers experiencing genuine financial difficulty in meeting their mortgage repayments and to low-income private renters experiencing similar difficulties in meeting rent payments.

Payment of the grants is conditional upon the States and Territories matching those sums dollar-for-dollar.

Particulars of the allocations under this scheme for 1982–83 and 1983–84 are set out below.

MORTGAGE AND RENT RELIEF SCHEME: BUDGET ALLOCATIONS
($'million)

Period	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1982–83	7.03	5.30	3.11	1.76	1.74	0.57	0.18	0.31	20.00
1983–84	6.98	5.25	3.21	1.75	1.77	0.56	0.17	0.31	20.00

Under the arrangements applicable to the operation of the Scheme, States are responsible for the day-to-day administration, including determining eligibility for assistance.

Although funds were allocated to Queensland in 1982–83 the Queensland Government did not elect to join the Scheme until 1983–84.

Crisis Accommodation for Families Program

In 1981–82, the Commonwealth introduced a crisis accommodation program for families in distress. Grants are provided to the States, the Northern Territory and Aboriginal Hostels Limited for the construction, purchase or leasing of dwellings to provide short term emergency accommodation for families. The objective of the program is to assist both one and two parent families who have an immediate need for accommodation.

In the 1981–82 Budget, $2m was provided for the commencement of the program. A further $4m was budgeted for 1982–83 and $4m again for 1983–84. Particulars of the allocations under this scheme for 1981–82, 1982–83 and 1983–84 are set out below.

CRISIS ACCOMMODATION FOR FAMILIES: BUDGET ALLOCATIONS
($'000)

Period	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1981–82	666	502	295	167	165	55	50	100	2,000
1982–83	1,326	1,000	600	334	332	108	100	200	4,000
1983–84	1,323	996	608	331	335	107	100	200	4,000

Housing loans insurance

The Housing Loans Insurance Corporation was established under the *Housing Loans Insurance Act* 1965 to insure approved lenders against losses arising from the making of housing loans. For further information regarding the Corporation and earlier operation of the Scheme, *see* Year Book No. 61, pages 235–6.

Following amendments to the Act in mid 1977, loans for owner-occupancy homes are insurable without limit on loan amount, interest rate or term. A once-and-for-all premium of 1.4 per cent of the amount of the loan is charged by the Corporation for the insurance of loans up to, but less than, 96 per cent of valuation, with the premium rate falling progressively to a minimum of 0.1 per cent on loans of less than 76 per cent of valuation. On loans from 96 to 100 per cent of valuation, the premium charged is 1.4 per cent of the valuation of the loan plus 10 per cent of the amount so calculated. The amendments to the Act also empowered the Corporation to insure loans for rental housing projects and loans to developers and builders. The Act was further amended in September 1983 to permit the Corporation to insure loans for the purchase, construction and improvement of commercial buildings and structures.

From November 1965, when the Corporation commenced operations, until the end of June 1983, 570,000 loans to the value of $13,000m had been insured.

State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis (*see* pages 430-431, for their financial advances to persons wishing to purchase or build a home). For summarised figures of total government construction of houses and other dwellings, *see* pages 434 and 436.

New South Wales—The Housing Commission of New South Wales. The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing to persons in the lower or moderate income groups.

Advances from the Commonwealth Government have provided most of the Housing Commission's capital funds and by 30 June 1983 had aggregated $1,273,063,000 of which $158,054,000 had been repaid. Other net funds of the Commission at 30 June 1983 comprised: repayable advances from the State, $204,852,000; public loans raised by the Commission, $18,720,000; grants from the Commonwealth Government, $258,884,000; grants from the State, $52,294,000 (including $10,674,000 from Consolidated Revenue and $41,620,000 mainly from proceeds of poker machine taxes); provision for maintenance of properties, $18,566,000; and accumulated surplus, $199,582,000. In addition, the Commission owed $46,985,000 to creditors, mainly for purchase of land and work-in-progress. These funds were represented by fixed assets, $1,898,279,000 (including $149,265,000 debtors for purchase of homes); and current assets, $19,807,000. In 1982–83, the Commission's income was $216,298,000 (including rent $188,317,000 and interest $19,517,000); expenditure was $188,988,000 (interest, $64,996,000).

The permanent dwellings provided by the Commission have been erected under the Federal-State Housing Agreements or from State loans and grants. In 1982–83, 2,090 houses and flats were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments, the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, as at 30 June 1983, were approximately $14.90 a week for elderly single persons and $24.80 a week for elderly couples. At 30 June 1983, 11,763 units had been completed.

Victoria—Ministry of Housing. The Ministry of Housing co-ordinates all Government housing activities in Victoria. The major statutory authorities presently within the Ministry are the Housing Commission House Finance Trust, (*see* page 499), the Government Housing Authority, the Registrar of Co-operative Societies, the Registrar of Co-operative Housing Societies and the Registrar of Building Societies.

Housing Commission, Victoria. The Commission was set up in 1938 as a result of the Housing Act of the previous year. Following an amendment to the Housing Act in January 1979, the function of the Commission is defined as assisting the Minister to carry out his duties, which include the determination of the present and future housing needs of the people of Victoria and the taking of steps in relation to: the provision of accommodation for persons in need; the provision of adequate and suitable houses for letting or leasing; the sale of houses to eligible persons; the making of advances to eligible persons for home purchase; the improvement of existing housing by the establishment and enforcement of adequate housing standards; encouraging and assisting in the provision of finance for persons building, purchasing or renovating houses; the development and sale of land for housing; the preparation and implementation of urban renewal proposals; the provision of parks, gardens and community facilities in areas where land or houses have been provided; the provision of shops and commercial facilities or land therefore; the provision of movable units for the accommodation of pensioners on the land of a householder; the provision of housing for officers and employees of government departments and public authorities in circumstances where this is desirable; and the integration of housing under the Act with private housing.

Since the signing of the 1945 Housing Agreement, the construction of dwellings has been financed by the Commonwealth Government and Commission Funds.

At 30 June 1983, the Housing Commission had completed 95,351 dwelling units under the State Housing Scheme and Federal-State Agreements, Works and Services Loans, Service Personnel Agreements (Housing), and Grants for Aged Person Housing. Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30 June 1983, 8,741 such units had been completed. These are also included in the figures for total constructions above.

Queensland—The Queensland Housing Commission. The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

During 1982–83 the Commission provided 3,540 dwelling units, bringing the total number under all schemes since the revival of housing construction in 1944–45 to 69,700. Of this number, 44,275 houses, or 63.5 per cent, were for home ownership, and 25,421, or 36.5 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Federal-State Housing Agreements and States Grants (Housing) legislation. Operating under the provisions of the *State Housing Act* 1945–1981, the Commission, through its scheme of mortgage finance, makes advances for the construction of dwellings to eligible persons who own a suitable building site. The number of dwellings completed during 1982-83 amounted to 2,227, making a total of 42,934 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 97 of the Commission's houses during 1982–83.

South Australia—The South Australian Housing Trust. The South Australian Housing Trust was established under the South Australian Housing Trust Act, 1936. Under the Housing Improvement Act, 1940, the Trust became the housing authority to administer the Act and the Trust's powers were extended. It is also the housing authority for South Australia under the *Housing Assistance Act* 1981.

The primary role of the Trust is to provide housing for those in need and within their capacity to pay; and to do so in ways which contribute to the economic development of the State.

In fulfilling its primary role, the Trust aims to provide housing which is appropriate for the householders' needs, is of an acceptable and modern standard and is integrated within the surrounding environment.

The Trust makes housing available to those in need by the construction, purchase or leasing of property which is let to tenants at market-related rents, with a rent rebate scheme for those with special needs; by the sale of housing, including sales to sitting tenants; by the administration of mortgage relief for home owners in crisis; by its management of the emergency housing service and by the exercise of its responsibilities in relation to private sector accommodation under the Housing Improvement Act.

The Trust has a separate responsibility to government to act as the State's industrial property authority, to provide industrial premises for approved additions to or extensions of industrial facilities within the State.

Two new schemes were commenced during the year to assist those in need:

- *A Mortgage Relief Scheme* designed to assist home buyers undergoing severe family and financial crises contributing to their inability to meet mortgage repayments.
- *A Rent Relief Scheme* designed to assist people facing hardship in meeting rental commitments in the private sector.

Other schemes initiated previously gained momentum during the year in assisting those in need. These include:

- The provision of up to 50 houses to voluntary agencies and youth groups for use as youth shelters.
- *The Low Deposit Purchase Scheme* designed to assist low-income people in purchasing a home through a nominal deposit and low interest loans.
- *The Design and Construct Scheme* under which private builders contract houses of their own design on their own land for the Trust.
- *The Housing Co-operatives Scheme* under which the Trust subsidises private rental co-operatives.

A total of 95,182 dwellings have been built, purchased or leased by the Trust since 1936. Subject to certain conditions, tenants may purchase the dwelling they rent from the Trust.

For further details *see* South Australian Year Book.

Western Australia—State Housing Commission of Western Australia. The activities of the State Housing Commission extend throughout the whole State. In addition to construction of a variety of dwellings for its own rental and purchase program as determined under the State Housing Act, the Federal State Housing Agreements prior to 30 June 1971, the *States Grants (Housing) Act* 1978, the 1978 Housing Agreement, and the 1981 Housing Agreement, its activities include: construction of houses for other Government Departments (both Commonwealth and State Government, and semi- and local government authorities) in Western Australia; and construction and maintenance of houses for the Government Employees' Housing Authority.

At 30 June 1983, the Commission had completed under all schemes since 30 June 1944 a total of 71,248 units of accommodation throughout the State (including 12,046 units completed under the *Defence Services Homes Act* 1918).

During the twelve months ended 30 June 1983, 1,320 units of accommodation were completed: metropolitan area, 687; country, 294; and north of the 26th parallel, 339. A further 304 units were under construction.

Building societies are a major source of housing finance in Western Australia. At 30 June 1983, it was estimated that the assets of permanent and terminating societies were about $2,471m. Currently, 8 permanent and 219 terminating societies are operating. Under the 1981 Housing Agreement with the Commonwealth the State is required to allocate a proportion of the funds the State receives under the Agreement to the Home Purchase Assistance Account. Advances are made from the account to terminating building societies which in turn make loans available to eligible applicants being those persons unable to obtain mortgage finance assistance in the open market or from other sources.

Under the *Housing Loans Guarantee Act*, 1957–1973, the guarantees provided to financial institutions enable loans to be made to lending institutions with full security. The Act enables building societies and other approved bodies to make high ratio advances to families of low and moderate means without additional charge. The interest rate charged to the borrower may not exceed 13.25 per cent reducible. Loans may be made for up to 90 per cent of the value of the house and land. The maximum loan permitted in respect of the metropolitan region south of the 26th parallel is $38,700. For a new house situated north of the 26th parallel and in the North West or Eastern Land Divisions, the maximum loan is $65,700 and in the Kimberley Land Division $68,400.

Tasmania—Department of Housing and Construction (*Housing Division*). The Department of Housing and Construction, established in September 1977, is comprised of the Housing and Construction Divisions. The two Divisions have been operating as separate entities during the year pending the necessary legislation to establish the Divisions into two Departments. It is anticipated that this legislation will be passed early in 1983–84. The Housing Division is continuing the functions of the former Housing Department, established in 1953, for the purpose of administering that portion of the *Homes Act* 1935 relating to the acquisition and development of land for housing purposes and the erection of homes for rental and sale to those deemed in need of assistance, and the *Casual Workers and Unemployed Persons Homes Act* 1936.

During 1982–83 dwelling completions numbered 556. The total number of dwellings constructed as at 30 June 1983 was 21,434, comprising 18,191 detached dwellings and semi-detached 1767 elderly persons' units, 360 multi-unit flats, 1,080 villa units, 29 moveable units and 7 neighbourhood houses.

The Division allots all welfare housing accommodation on a rental basis. Weekly rental was between $45.00–55.00 at 30 June 1983. Approximately 70 per cent of tenants are in receipt of a rental rebate. Under current policy a tenant whose income is below the State Minimum Wage would pay 20 per cent of that income as rent. This percentage was increased from 18 during the year. Tenants whose income is above the State Minimum Wage pay between 20 and 25 per cent dependent upon their level of income, the higher the income the greater the percentage.

Housing schemes in Australian Territories

Northern Territory. In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission was established in 1959 and operates under authority of the *Housing Act* 1979. The Commission became autonomous on 1 October 1969 and, in addition to its role of providing residential accommodation to persons of limited means, its functions were broadened as from 1 July 1978 to include the provision of housing for employees of the Northern Territory Government and related authorities and the provision of residential, office, industrial or other accommodation for the Commonwealth and the Territory for public purposes and approved commercial and welfare organisations.

Australian Capital Territory. The Commonwealth Government provides houses and flats for rental to persons on low incomes who live or are employed in the Australian Capital Territory. At 30 June 1983 the Department of Territories and Local Government controlled 6,558 houses and 3,261 flats for rental purposes. Government rental houses may be purchased by tenants.

Summary of rental activities of government authorities

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1977–78 to 1982–83, and the second shows the number of tenants paying rent for dwellings under control of government housing authorities at the end of each year 1977–78 to 1982–83.

GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS
($'000)

Year	*N.S.W.*	*Vic.(a)*	*Qld*	*S.A.*	*W.A.(a)*	*Tas.*	*N.T.(a)*	*A.C.T.*	*Aust.*
1977-78	99,566	53,753	32,069	42,331	24,337	9,855	4,467	20,538	286,916
1978-79	114,404	64,556	39,382	42,785	27,764	12,722	9,090	20,658	321,361
1979-80	127,584	68,819	42,924	46,775	28,882	16,100	12,115	20,123	363,322
1980-81	143,409	72,122	44,582	52,889	34,585	17,646	15,241	20,497	400,971
1981-82	162,323	82,322	51,112	60,403	36,648	21,557	17,915	22,896	455,176
1982-83	188,317	104,290	55,865	70,243	40,475	25,149	18,712	37,780	540,831

(*a*) Figures relate to Housing Commission only.

GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT

Year	*N.S.W.*	*Vic.(a)*	*Qld*	*S.A.*	*W.A.(a)*	*Tas.(b)*	*N.T.(b)*	*A.C.T.(b)*	*Aust.*
1977-78	82,893	40,151	21,863	39,757	24,323	7,489	3,665	10,575	230,716
1978-79	85,997	40,049	22,730	40,780	25,011	8,238	5,540	10,550	238,895
1979-80	90,124	40,090	23,063	41,892	25,867	9,258	6,121	10,282	246,697
1980-81	93,178	41,708	23,581	43,652	26,060	9,886	6,635	10,014	254,714
1981-82	95,237	43,900	24,253	45,285	27,707	10,412	6,882	9,495	263,171
1982-83	97,286	45,806	25,421	47,403	28,656	10,996	7,167	9,638	272,373

(*a*) Figures relate to Housing Commission only. (*b*) Number of occupied dwellings at 30 June.

Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the Commonwealth or State Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

State and Territory authorities and agencies

New South Wales: State Bank of New South Wales—Sale of Homes Agency. A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. Since 30 November 1976, the sale of these homes on a terms basis has not been permitted, although the Agency still acts as agent for the Commission in collecting instalments payable by purchasers of homes sold prior to that date. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954-55 and 1955-56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent a year. Total advances under that scheme amounted to $646,648; at 30 June 1983 the advances outstanding amounted to $73,351 in respect of 27 houses.

Between 1 July 1956 and 30 November 1976, the Sale of Homes Agency acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Federal-State Housing Agreements. The terms of sale provided for a minimum deposit of $200 and repayment of the balance over a maximum period of forty-five years, with interest rates since the inception of the scheme ranging from 4.25 to 6.75 per cent a year. Particulars of the advances made by the Agency in connection with the sale of houses erected under the 1956, 1961, 1966 and 1973 Agreements and the *States Grants (Housing) Act* 1971 are given in the following table.

STATE BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY ADVANCES FOR HOMES SOLD UNDER THE 1956, 1961, 1966 AND 1973 FEDERAL-STATE HOUSING AGREEMENTS AND THE STATES GRANTS (HOUSING) ACT OF 1971

	Advances during year		*Total advances to end of year*		*Advances outstanding at end of year(a)*	
Year	*Number of houses*	*Amount*	*Number of houses*	*Amount*	*Number of houses*	*Amount*
		($'000)		($'000)		($'000)
1977-78	—	—	29,176	246,802	17,818	134,529
1978 79	—	—	29,176	246,802	16,802	125,126
1979-80	—	—	29,176	246,802	15,628	114,112
1980-81	—	—	29,176	246,802	14,517	103,869
1981-82	—	—	29,176	246,802	13,732	96,437
1982-83	—	—	29,176	246,802	13,032	90,123

(*a*) Comprises principal outstanding and loan charges due but not paid.

Prior to 30 November 1976 the Sale of Homes Agency also acted as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who had established a housing need could apply to the Commission to have a standard-type dwelling erected on their own land. The houses were sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956 to 1973 Housing Agreements and the *States Grants* (*Housing*) *Act* 1971. Up to 30 June 1983, 769 houses had been built at a cost of $8,223,000; the balance of indebtness at that date was $3,187,000.

State Bank of New South Wales—Other loans. The State Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The current rate of interest on new long-term loans for housing purposes is 12.5 per cent a year.

Victoria: Housing Commission of Victoria. Commission policy is to encourage home ownership; of the 95,356 (1982-93,437) dwelling units built to 30 June 1983, under the State Housing Agreement, the Federal State Agreements Housing Grants and Commission Funds, a total of 50,725 (1982-50,604) houses have been sold; 28,720 (1982-28,658) in the metropolitan area and 22,005 (1982-21,946) in the country.

Home Finance Trust. The Home Finance Trust is a corporate body constituted under the *Home Finance Act* 1962. It is authorised to receive money on deposit, the repayment of which is guaranteed by the Government of Victoria, for the purpose of making loans for housing on the security of first and second mortgages. Under the terms of the Act the Trust is precluded from making loans in certain circumstances.

The number of loans granted by the Trust to 30 June 1983 and subsisting totalled 2,507 (1982-2,074) on the security of first mortgage and 3,745 (1982-3,930) on second mortgage, the amount involved being $45.5m (1982-$21.9m) and $18.4m (1982-$18.7m) respectively.

(*See* Savings Banks, page 243 of Year Book No. 61, for activities of the State Savings Bank of Victoria.)

Queensland: Queensland Housing Commission. Loans from the Commonwealth and State Government are the major source of capital funds for the Commission. Under the *State Housing Act* 1945-81, an eligible person who is the owner of a suitable building site may obtain an advance, secured by mortgage on the land, from the Housing Commission for the erection of a dwelling. The Housing Commission also provides mortgage finance for the purchase of homes already built or to be built by private contractors. At 30 June 1982, the maximum advance under mortgage finance was $30,000 with interest chargeable at 8 per cent, and repayments over periods up to 45 years.

Western Australia: State Housing Commission of Western Australia. Under current policy, all sales of Commission rental homes are financed with funds either from the Home Purchase Assistance Account where the family is eligible, or from other lending authorities. The interest rate starts between six per cent and ten per cent according to the applicant's income, and increases by half a per cent each year until it is one per cent below the Commonwealth Savings Bank rate for housing loans. The maximum repayment period is thirty years.

New homes constructed for purchase are sold to eligible families under the *State Housing Act* 1980. Sales can be under contract of sale or mortgage conditions. The interest rate is currently 8.5 per cent and is reviewed annually. The maximum income an applicant can earn varies throughout the

State from $298.40 gross per week in the Metropolitan area to $421.30 in the Kimberleys. This increases by $5.00 per week for each dependent child in excess of two. The maximum value of house and land is $36,000 in the metropolitan area with a maximum advance of 90 per cent of the valuation. In the remainder of the State the maximum value of house and land varies from $37,500 to $72,000, also subject to a 90 per cent maximum advance.

Assistance through Terminating Building Societies is available to acceptable applicants from the Loans Priority List under first mortgage conditions if they are able to meet the eligibility requirements. Funds are not available for second mortgages. The interest rate on advances varies from 6 per cent to 13.5 per cent depending on family income, and the maximum repayment period is thirty years. The societies are required to accept no less than 3 per cent of the value of the house and land as a cash equity, but a deposit of 10 per cent or greater is sought by the societies. If the amount of finance required is in excess of the combined maximum advance and deposit provided, a second mortgage or personal loan will be required to bridge the gap.

In the metropolitan area, to be eligible for assistance through the societies, applicants' incomes cannot exceed $240.00 per week, plus $15.00 per week for each dependent child. The maximum value of house and land is $36,000 with a maximum advance of 90 per cent of the valuation being obtainable. The remainder of the State is divided into areas in which the income eligibility varies from $240.00 per week to $320.00 per week plus $15.00 per week for each dependent child. The maximum advance in these areas is 90 per cent on the maximum value of house and land which varies from $36,000 to $72,000.

(*See* Savings Banks, page 243 of Year Book No. 61, for activities of the Savings Bank Division of the Rural and Industries Bank of Western Australia.)

Tasmania: Department of Housing and Construction, Housing Division. The division no longer provides loans to occupants on a purchase contract. The number of loans outstanding at 30 June 1983 was 5,088 and the amount outstanding, $42,734,000.

Agricultural Bank of Tasmania. The Agricultural Bank of Tasmania is responsible for the administration of funds made under the Home Purchase Assistance section of the *Housing Assistance Act* 1978. A new Housing Agreement operating from 1 July 1978 consolidates all past agreements. The State has also provided State Loan Funds for lending under the Homes Act. Interest rates vary from 6 per cent to 13.5 per cent depending on need. The term varies depending on the applicant's capacity to repay.

During the year the State provided additional funds specifically for the construction of homes at an interest rate of 7 per cent fixed for three years and increasing by 0.5 per cent a year thereafter up to within 1 per cent of the then current Commonwealth Savings Bank interest rate for housing.

Principles which apply under the new agreement include:

- To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- Provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need, to minimise continued availability of assistance to those no longer in need and to accord benefits which are designed so that assistance being provided is related to the particular family's or individual's current economic and social circumstances.
- The State is able to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve these principles.

The following table shows details for recent years.

AGRICULTURAL BANK, ADVANCES FOR HOUSING (*a*)

Particulars	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Advances approved:						
Number	366	366	281	386	354	450
Value ($'000)	8,354	7,532	6,551	10,129	9,448	12,665
Advances outstanding at 30 June ($'000)	43,726	49,190	52,740	58,250	65,056	71,020

(*a*) Excludes advances to Co-Operative Housing Societies.

Northern Territory: Loans Scheme. On 1 October 1979, the Northern Territory Government introduced a loans scheme to provide finance for the erection of houses, the purchase, enlargement or modification of existing dwellings or the completion of partially erected dwellings. This scheme was re-structured in August 1982 and loans are now provided to a maximum of $50,000 or 95 per cent of house/land valuation. The scheme incorporates a system of variable escalating interest rates with income geared starts. The initial starting interest rates vary according to the borrowers' incomes and escalate by annual increments of 0.5 per cent a year up to a common maximum rate. Where borrowers are capable of obtaining finance privately, loans are proportionately lower and on a second mortgage basis.

The restructuring also effects certain eligibility criteria. Single persons are now eligible to apply and loans can now be obtained for new or existing buildings whereas in the past, emphasis was placed on the purchase of new dwellings. A previous restructuring exercise carried out in January 1981 increased the income limit for borrowers and imposed a pre-requisite of twelve months residency prior to application. Potential borrowers who already owned a dwelling (including elsewhere in Australia) were no longer eligible.

Sales Schemes. Two schemes exist to allow eligible tenants of Northern Territory Housing Commission dwellings to purchase. Under the *General Public Sales Scheme,* sales are on a cash basis only to approved tenants. A *Staff Sales Scheme* also operates to allow tenants of Northern Territory Public Service dwellings to purchase. Sales are for cash or on terms requiring a minimum deposit of 5 per cent of the purchase price with repayments over a maximum period of 45 years including interest at either 6.75 per cent or 9.75 per cent subject to a means test. A requirement of two years satisfactory tenancy, which existed until July 1982, no longer applies.

Australian Capital Territory: Loans to a maximum of $28,000 over a maximum term of thirty-two years may be granted by the Commissioner for Housing for the purchase or erection of dwellings in the Australian Capital Territory where the value of the dwelling does not exceed the median sale price of dwellings in the Territory. The following conditions must be satisfied before an applicant may qualify for the loan:

- may not already own a dwelling in the Australian Capital Territory or Queanbeyan;
- must live or work in the Australian Capital Territory;
- generally the applicant or their spouse must not have already received financial assistance from Government funds for housing in the Australian Capital Territory;
- must not have assets exceeding $15,000;
- the value of the house must not exceed $56,000.

In addition to the above qualifications a means test is applied to applicants for loans. Applicants whose joint income does not exceed 120 per cent of the Australian male seasonally adjusted average weekly earnings may qualify for a loan. An additional income allowance of $2.00 per week is made for each dependant child in excess of two.

The rate of interest for the first year of the loan is 5.75 per cent effective. Thereafter the interest rate increases by 0.5 per cent each year until it reaches an effective rate of 13.5 per cent. At 30 June 1983, 11,392 houses were under mortgage to the Commissioner.

In the 1982 Budget it was announced that government houses could only be purchased through Commissioner for Housing Loans, the additional criterion being the purchaser must be the tenant. No further Commonwealth of Australia mortgages would be issued. At 30 June 1983 16,347 houses had been sold to tenants, with 8,273 of these currently under mortgage.

Savings banks, trading banks, life insurance companies and registered building societies

For information on loans approved to individuals for owner occupied housing *see* Chapter 21, Private Finance.

CONSTRUCTION

Building

Building activity is a significant indicator of the level of economic activity. In addition, the level of building activity and the types of buildings being constructed affect the Australian physical and social environment. Building approvals statistics give an indication of the potential future level of investment of private individuals, companies and government agencies in approved building construction. Building activity statistics show the level of actual building construction activity in terms of the level of commencements and completions, building jobs under construction and the value of work done and yet to be done on building jobs.

The building statistical collections cover all new dwellings of any value, new other building jobs valued at $10,000 and over, and alterations and additions (to both dwellings and other building) valued at $10,000 and over. From 1966–67 to 1972–73, alterations and additions of $10,000 and over were included with new dwellings and new other building. From 1973–74, alterations and additions (of $10,000 and over) to new dwellings are shown separately, but for other building, new work and alterations and additions continue to be shown combined.

From the September quarter 1980 a new Building Activity Survey replaced the previous quarterly Building Operations Census. The major features of the new survey are as follows:

- replacement of the previous complete enumeration of private sector jobs involving new house construction or alterations and additions valued at $10,000 or more to houses by a sample survey; and
- continuation of the complete quarterly enumeration of jobs involving construction of new dwellings other than private sector houses, construction of new other buildings with an approval value of $10,000 or more and all alterations and additions with an approval value of $10,000 or more to buildings other than private sector houses.

From the September quarter 1981 two additional changes were introduced:

- a one-month-lagged framework of approvals is now used as the basis for selection of both house and non-house building jobs (previously only private sector house jobs were selected from a one-month-lagged approvals framework); and
- in general, a building job is now considered to have commenced, for the purposes of the statistical collection, only when the value of work done on that job as reported by the builder is equal to or greater than a pre-determined (threshold) value.

Number of new houses

The following table provides a summary of the number of new houses approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1982–83. For a graph showing these details over an eight-year period, *see* Plate 41, page 435.

NUMBER OF NEW HOUSES, 1982–83
('000)

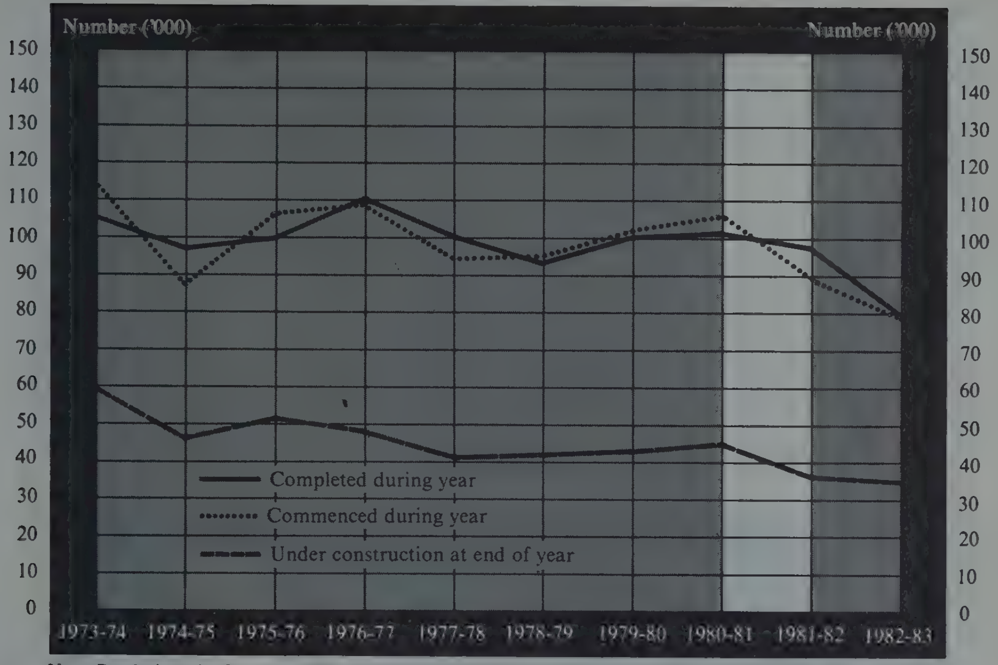
	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Private Sector—									
Approved	22.5	20.8	18.5	5.2	8.4	1.7	0.8	1.2	79.0
Commenced	19.9	19.0	17.4	4.6	7.5	1.4	0.7	1.2	71.5
Under construction(*a*)	9.8	10.6	4.9	1.4	2.2	1.0	0.4	0.4	30.7
Completed	21.9	17.7	18.7	4.6	8.1	1.3	0.6	1.2	74.1
Public Sector—									
Approved	1.4	2.1	1.0	1.0	1.0	0.4	0.7	0.3	7.8
Commenced	1.4	2.0	0.9	1.0	0.9	0.3	0.7	0.3	7.4
Under construction(*a*)	0.7	1.2	0.5	0.6	0.1	0.1	0.5	0.2	3.9
Completed	1.1	1.1	0.6	0.9	0.9	0.3	0.6	0.2	5.8
Total—									
Approved	23.9	22.9	19.5	6.2	9.4	2.1	1.5	1.4	86.9
Commenced	21.3	20.9	18.3	5.5	8.4	1.7	1.4	1.4	78.9
Under construction(*a*)	10.5	11.8	5.4	2.0	2.3	1.1	0.9	0.6	34.5
Completed	23.0	18.8	19.4	5.5	9.1	1.6	1.2	1.4	79.9

(*a*) At end of period.

Number of new houses approved by material of outer walls

The use of certain materials for outer walls is dictated by such factors as cost, durability, appearance and climatic conditions. Changes in the materials used over time indicate changes in the characteristics of the housing stock.

NEW HOUSES: AUSTRALIA, 1973-74 TO 1982-83



Note: Breaks in series from 1980-81 and 1981-82

PLATE 41

The following table shows the number of new houses approved in each State and Territory during the year 1982–83, classified according to the material of their outer walls.

NUMBER OF NEW HOUSES APPROVED BY MATERIAL OF OUTER WALLS, 1982–83
('000)

Material of outer wall	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Double brick(*a*)	2.2	1.3	2.1	1.6	7.9	0.1	0.2	0.1	15.5
Brick veneer	17.7	16.4	11.5	3.2	0.7	1.5	0.9	1.4	53.3
Timber	1.2	1.6	1.1	0.2	0.1	0.3	0.1	–	4.6
Fibre cement	2.3	0.9	4.2	0.8	0.6	0.1	0.1	–	9.0
Other	0.5	0.1	0.6	–	0.1	–	0.2	–	1.5
Not stated	–	2.5	–	0.3	–	–	–	–	2.8
Total	**23.9**	**22.9**	**19.5**	**6.2**	**9.4**	**2.1**	**1.5**	**1.4**	**86.9**

(*a*) Includes houses constructed with outer walls of stone or concrete.

Number of new other dwellings

The level of other dwelling construction is highly variable and does not follow the traditionally regular pattern experienced in house construction. This can be explained partly by the generally larger size of other dwelling construction jobs and also by the extent of speculative building of private flats, home units and similar other dwelling projects. Although construction of government-owned other dwellings is substantial, the proportion of government-owned other dwellings to total other dwellings constructed is smaller than that of government-owned houses to total houses.

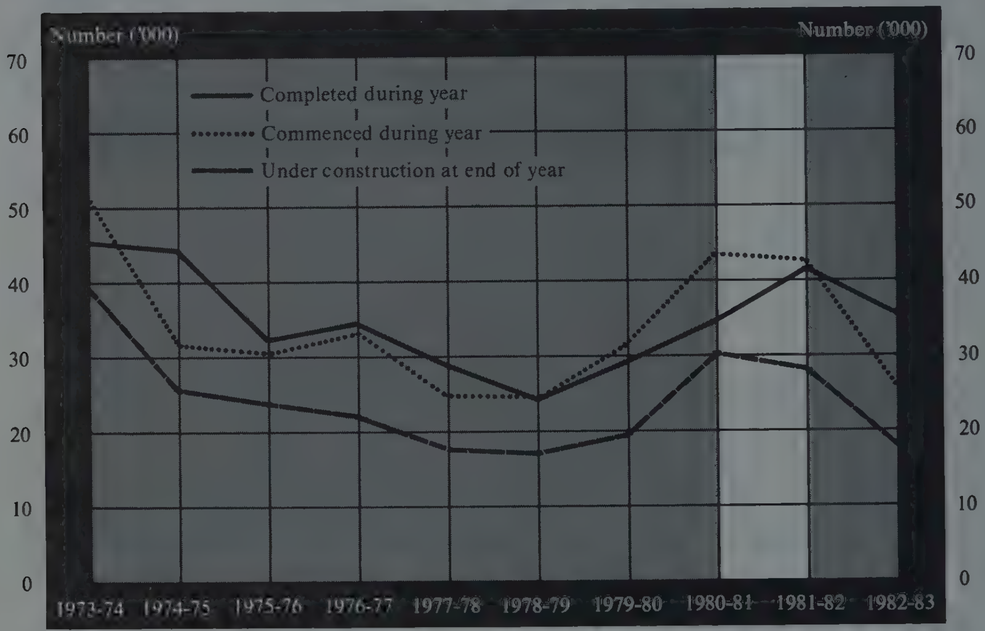
The following table shows the number of new other dwellings approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1982–83. For a graph showing these details over an eight year period, *see* Plate 42, page 436.

NUMBER OF NEW OTHER DWELLINGS, 1982–83
('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Private Sector—									
Approved	7.8	4.6	6.8	1.3	2.1	0.3	0.6	0.3	23.8
Commenced	6.7	4.2	5.6	1.2	1.8	0.3	0.4	0.3	20.6
Under construction(*a*)	5.4	3.2	4.5	0.7	0.8	0.2	0.2	0.4	15.3
Completed	11.4	4.0	9.1	1.3	3.4	0.4	0.3	0.4	30.3
Public Sector—									
Approved	1.7	1.1	0.8	1.4	0.4	0.4	0.1	–	5.8
Commenced	1.4	1.0	0.7	1.4	0.5	0.3	0.1	–	5.2
Under construction(*a*)	1.0	0.3	0.4	0.9	–	0.1	0.1	–	2.8
Completed	1.2	1.0	0.6	1.1	0.6	0.4	0.3	–	5.1
Total—									
Approved	9.4	5.7	7.6	2.6	2.5	0.7	0.7	0.4	29.6
Commenced	8.1	5.2	6.3	2.6	2.3	0.6	0.5	0.3	25.9
Under construction(*a*)	6.4	3.6	4.8	1.6	0.8	0.3	0.3	0.4	18.1
Completed	12.6	5.0	9.7	2.4	4.0	0.8	0.6	0.4	35.4

(*a*) At end of period.

NEW OTHER DWELLINGS: AUSTRALIA, 1973-74 TO 1982-83



Note: Breaks in series from 1980-81 and 1981-82

PLATE 42

Value of buildings

The following table shows the value of all buildings approved, commenced, under construction, completed, work done and work yet to be done in Australia for the year 1982–83, according to the class of building. The classification of other building by type of building is according to the function a building is intended to serve as specified on building authorisations.

VALUE BY CLASS OF BUILDING, 1982–83
($ million)

Class of building	*Approved*	*Commenced*	*Under construction(a)*	*Completed*	*Work done (b)*	*Work yet to be done (a)*
New houses	3,754.6	3,573.6	1,702.1	3,646.7	3,607.3	833.8
New other dwellings	1,139.8	1,035.3	1,026.0	1,518.4	1,328.7	533.0
Total new dwellings	*4,894.4*	*4,608.9*	*2,728.2*	*5,165.1*	*4,936.0*	*1,366.8*
Alterations and additions to dwellings(c)	*627.6*	*645.7*	*298.8*	*631.7*	*631.0*	*149.3*
Hotels, etc.	240.9	267.2	309.9	275.5	229.3	191.6
Shops	392.2	435.8	336.8	585.4	572.2	128.6
Factories	496.3	537.5	721.5	899.0	749.3	270.4
Offices	929.3	989.2	1,172.9	1,037.2	896.4	669.8
Other business premises	451.2	444.9	268.5	437.3	429.5	139.1
Educational	460.7	452.5	398.4	465.3	455.9	205.0
Religious	42.1	48.1	22.0	59.5	53.8	9.4
Health	199.5	203.2	291.3	304.4	222.6	140.7
Entertainment and recreational	229.1	221.6	273.2	284.5	259.6	96.2
Miscellaneous	362.8	358.3	875.2	348.7	405.0	553.7
Total other building	*3,804.2*	*3,958.2*	*4,669.7*	*4,696.8*	*4,273.6*	*2,404.3*
Total building	**9,326.2**	**9,212.8**	**7,696.7**	**10,493.6**	**9,840.7**	**3,920.4**

(*a*) At end of period. (*b*) During period. (*c*) Valued at $10,000 or more.

Construction (Other Than Building)

These statistics relate to work by private contractors on construction (other than building) prime contracts valued at $100,000 or more, inclusive of all associated sub-contract work performed for the prime contractor. Alterations and additions undertaken as prime contracts valued at $100,000 or more are included in the statistics. Repairs and maintenance contracts, construction undertaken by government authorities involving their own work forces, and construction on their own account by enterprises in the private sector, are excluded.

The construction (other than building) classification is broadly compatible with that used for the publication of data from the 1978-79 Construction Industry Survey *see* page 508.

The following tables show the value of construction (other than building) activity undertaken as prime contracts commenced, under construction, completed, work done and work yet to be done in Australia for the years 1981–82 and 1982–83.

VALUE OF CONSTRUCTION (OTHER THAN BUILDING) PRIME CONTRACTS BY OWNERSHIP, 1981–82

($ million)

	Commenced	*Under construction(a)*	Completed	*Work done(b)*	*Work yet to be done(a)*
PRIVATE SECTOR					
Roadwork	202.8	108.2	186.3	203.2	44.0
Dams, water supply and distribution, sewerage and drainage	44.6	41.9	23.2	47.0	12.7
Electrical power transmission, heavy electrical generating plant	10.6	13.5	12.0	16.3	5.1
Harbours	23.6	9.8	35.4	30.6	2.3
Other heavy industrial plant etc.	1,046.8	1,354.6	424.4	r696.3	r763.6
Other (*c*)	299.9	417.2	183.0	343.6	147.2
Total	*1,628.3*	*1,945.2*	*864.3*	*r1,337.0*	*r974.9*
PUBLIC SECTOR					
Roadwork	185.5	150.1	185.1	202.1	58.8
Dams, water supply and distribution, sewerage and drainage	198.1	379.6	130.0	234.3	151.3
Electrical power transmission, heavy electrical generating plant	844.3	2,565.3	499.0	752.5	1,391.6
Harbours	80.6	360.6	30.6	184.4	109.8
Other heavy industrial plant etc.	149.1	534.5	129.8	232.5	217.2
Other (*c*)	262.3	1,458.3	297.5	r509.5	r8911.0
Total	*1,719.9*	*5,448.2*	*1,272.1*	*r2,115.3*	*r2,820.1*
TOTAL					
Roadwork	388.3	258.3	371.4	405.4	102.7
Dams, water supply and distribution, sewerage and drainage	242.7	421.5	153.2	281.3	164.1
Electrical power transmission, heavy electrical generating plant	854.9	2,578.8	511.1	768.7	1,396.7
Harbours	104.2	370.4	66.0	215.0	112.1
Other heavy industrial plant etc.	1,195.9	1,889.2	554.2	r928.8	r980.8
Other (*c*)	562.2	1,875.4	480.5	r853.1	r1,038.6
Total	**3,348.2**	**7,393.5**	**2,136.4**	**r3,452.3**	**r3,795.0**

(*a*) At end of period. (*b*) During period. (*c*) Comprises bridges, railways, pipelines, street and highway lighting, telecommunications and miscellaneous.

1982–83
($ million)

	Commenced	*Under construction(a)*	Completed	*Work done(b)*	*Work yet to be done(a)*
PRIVATE SECTOR					
Roadwork	171.0	85.6	203.1	181.7	42.7
Dams, water supply and distribution, sewerage and drainage	24.3	7.3	71.5	48.2	1.6
Electrical power transmission, heavy electrical generating plant	41.2	44.2	14.4	26.3	24.9
Harbours	31.0	11.0	30.3	31.8	2.0
Other heavy industrial plant etc.	396.3	1,547.7	590.9	1,053.5	495.2
Other (*c*)	191.8	249.6	395.3	282.0	92.7
Total	*855.6*	*1,945.4*	*1,305.4*	*1,623.6*	*659.0*
PUBLIC SECTOR					
Roadwork	351.3	248.2	266.9	293.0	130.3
Dams, water supply and distribution, sewerage and drainage	176.6	379.9	224.6	243.0	133.2
Electrical power transmission, heavy electrical generating plant	408.9	3,008.5	462.8	1,043.2	1,216.3
Harbours	13.4	136.1	276.8	138.9	23.2
Other heavy industrial plant etc.	173.6	572.9	251.9	238.2	254.0
Other (*c*)	330.6	1,663.6	445.7	751.7	788.0
Total	*1,454.4*	*6,009.1*	*1,928.7*	*2,708.0*	*2,545.1*
TOTAL					
Roadwork	522.4	333.8	470.0	474.7	173.0
Dams, water supply and distribution, sewerage and drainage	200.9	387.2	296.1	291.2	134.8
Electrical power transmission, heavy electrical generating plant	450.1	3,052.8	477.3	1,069.5	1,241.2
Harbours	44.4	147.1	307.1	170.7	25.2
Other heavy industrial plant etc.	569.9	2,120.5	842.7	1,291.8	749.2
Other (*c*)	522.3	1,913.1	841.0	1,033.8	880.7
Total	**2,310.0**	**7,954.5**	**3,234.1**	**4,331.6**	**3,204.1**

Construction Industry Survey

This section contains statistics obtained from a sample survey of private sector construction establishments and of public sector enterprises engaged in construction activity, conducted in respect of 1978–79. This is the first time the ABS has obtained comprehensive information about the private sector construction industry, or of construction activity of the public sector.

The survey was undertaken in response to requests from both private and government organisations for such data about the construction industry. The private sector collection was conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards, thereby allowing comparative analysis across different industry sectors. The results of this survey are therefore comparable with economic censuses undertaken annually for the mining, manufacturing and electricity and gas industries and periodically for the wholesale, retail and selected service industries.

Private Sector Construction Industry Statistics

The collection has provided detailed information on employment, wages, operating expenses, turnover, value added, capital expenditure, and on the structure and size of establishments in the private sector construction industry. The following tables show for private sector construction establishments, summary statistics relating to their operations; and statistics on the value of construction work done, by industry class and broad commodity group, for 1978–79. Further detailed statistics are contained in ABS statistical publications: *Private Sector Construction Establishments, Details of Operations by Industry Class, Australia,* 1978–79 (8714.0); *Private Sector Construction Establishments, Details of Operations by Industry Class, States and Territories,* 1978–79 (8715.0–8722.0).

Public Sector Construction Activity Statistics

Theoretically the same conceptual framework applies to both the public and private sectors, i.e. preferably all public sector establishments and ancillary units classified to the industries in Division E (Construction) of the Australian Standard Industrial Classification (ASIC) should have been included in the scope of the Survey. However, at the time the survey was conducted, appropriate definitions of public sector establishments and ancillary units had not been developed, because of widely divergent accounting systems within the public sector.

The public sector collection therefore measured the significance of construction activity undertaken by public sector enterprises using their own workforces. It provided information on direct expenses, payments to contractors, and employment associated with new construction and major alterations and additions. Because of the different concepts used in the collection of these data, the public sector results cannot be validly aggregated with those for the private sector. The following table shows construction expenditure of public sector enterprises by type of construction activity and level of government, for 1978–79. Further detailed statistics are contained in ABS publication: *Construction Activity in the Public Sector, Australia,* 1978–79 (8712.0).

Enterprise and Industry Concentration Statistics

Industry statistics shown earlier relate to establishments. Statistics are also available for enterprises engaged in the construction industry. These have been published in the publication: *Enterprise Statistics, Details by Industry Class, Australia,* 1978–79 (8103.0).

Similarly, industry concentration statistics have been published for 1978–79. These aim to show the extent to which a few enterprise groups predominate in the construction industries, and are available in the publication: *Construction Industry Survey, Industry Concentration Statistics, Private Sector, Australia,* 1978–79 (8723.0).

PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY CLASS, AUSTRALIA, 1978–79

ASIC Code	*Industry class*	*Establishments operating at 30 June*	*Average employment over whole year*			*Wages and Salaries*	*Turnover*	*Stocks*		*Total purchases, transfers in and selected expenses*	*Value added*	*Fixed capital, expenditure less disposals*
			Males	*Females*	*Persons*			*Opening*	*Closing*			
		(No.)	(No.)	(No.)	(No.)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)
4111	House construction	13,347	28,898	10,597	39,495	197,127	2,576,494	385,757	445,478	2,004,902	631,313	36,216
4112	Residential building construction, n.e.c.	1,217	3,353	964	4,317	32,647	421,812	122,583	165,828	369,551	95,506	11,292
4113	Non-residential building construction	2,719	31,618	3,361	34,978	404,674	2,917,730	127,773	127,996	2,271,577	646,376	23,486
411	Total building construction	17,283	63,868	14,922	78,790	634,448	5,916,037	636,113	739,302	4,646,031	1,373,195	70,994
4121	Road and bridge construction	592	10,023	714	10,737	136,025	671,666	25,506	27,924	439,091	234,993	20,082
4122	Non-building construction, n.e.c.	1,310	23,389	1,929	25,318	355,490	1,469,844	51,088	72,065	912,560	578,261	52,497
412	Total non-building construction	1,903	33,412	2,643	36,054	491,515	2,141,510	76,595	99,990	1,351,651	813,254	72,579
41	*Total general construction*	*19,186*	*97,280*	*17,564*	*114,844*	*1,125,963*	*8,057,546*	*712,708*	*839,292*	*5,997,682*	*2,186,448*	*143,573*
4231	Concreting	2,040	7,548	1,661	9,208	68,807	327,936	7,361	8,023	194,098	134,500	4,333
4232	Bricklaying	3,386	7,295	1,732	9,027	33,004	132,478	3,260	3,154	51,390	80,983	1,988
4233	Roof tiling	499	1,550	386	1,937	11,817	72,340	2,629	3,436	47,235	25,912	529
4234	Floor and wall tiling	1,055	1,629	722	2,351	5,827	46,326	1,677	1,981	25,517	21,112	881
4241	Structural steel erection	311	2,916	265	3,180	37,676	103,631	3,601	5,273	46,534	58,769	3,061
4242	Plumbing	6,267	19,012	5,051	24,062	151,529	651,007	30,177	34,951	360,405	295,376	9,514
4243	Electrical work	4,420	20,781	4,046	24,827	205,439	682,940	37,169	39,192	359,486	325,478	8,957
4244	Heating and air-conditioning	599	7,131	863	7,994	84,683	368,708	16,652	18,075	243,491	126,641	3,655
4245	Plastering and plaster fixing	1,484	4,965	1,080	6,046	38,972	188,092	6,806	7,321	112,597	76,010	2,063
4246	Carpentry	2,362	5,348	1,303	6,650	36,778	137,076	4,461	5,132	64,154	73,593	2,887
4247	Painting	5,280	12,100	2,946	15,045	74,338	273,803	6,608	8,113	108,382	166,926	4,393
4248	Earthmoving and dredging	1,874	7,721	1,555	9,277	82,019	356,759	13,913	15,156	186,576	171,426	24,359
4249	Special trades, n.e.c.	2,588	9,849	2,212	12,061	92,423	422,456	20,753	22,833	242,602	181,934	8,899
42	*Total special trade construction*	*32,165*	*107,845*	*23,821*	*131,666*	*923,312*	*3,763,552*	*155,066*	*172,640*	*2,042,467*	*1,738,660*	*75,519*
41–42	**Total construction**	**51,351**	**205,125**	**41,385**	**246,510**	**2,049,275**	**11,821,098**	**867,773**	**1,011,931**	**8,040,149**	**3,925,108**	**219,093**

PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—VALUE OF CONSTRUCTION WORK DONE BY INDUSTRY CLASS BY BROAD COMMODITY, AUSTRALIA, 1978-79

($'000)

	Building						
Industry	*Houses*	*Other residential buildings*	*Non-residential buildings*	*Total building*	*Total Non-building*	*Demolition*	*Total construction work done*
Total Building Construction (411)	2,540,254	536,414	2,799,341	5,876,008	66,732	880	5,943,621
Total Non-Building Construction (412)	10,034	2,588	36,024	48,645	2,031,479	199	2,080,323
Total General Construction (41)	*2,550,287*	*539,002*	*2,835,365*	*5,924,654*	*2,098,211*	*1,079*	*8,023,944*
Concreting (4231)	93,208	32,649	129,723	255,580	70,620	4	326,203
Bricklaying (4232)	76,310	12,881	38,590	127,779	4,279	13	132,071
Roof Tiling (4233)	60,677	3,464	5,739	71,681	26	–	71,707
Floor & Wall Tiling (4234)	28,185	3,313	12,766	44,263	875	–	45,138
Structural Steel Erection (4241)	2,831	582	53,537	56,949	44,947	183	102,080
Plumbing (4242)	314,717	52,327	244,463	611,507	30,613	–	642,120
Electrical Work (4243)	141,611	23,275	376,545	541,429	112,199	–	653,628
Heating & Air Conditioning (4244)	34,600	3,567	315,102	353,270	4,271	–	357,540
Plastering & Plaster Fixing (4245)	98,676	14,250	66,600	179,527	400	–	179,927
Carpentry (4246)	54,816	8,009	70,353	133,180	3,861	8	137,048
Painting (4247)	134,505	20,617	97,542	252,664	19,282	–	271,945
Earthmoving & Dredging (4248)	29,176	3,862	40,917	73,956	269,406	726	344,088
Special Trades n.e.c. (4249)	81,018	6,939	199,296	287,254	105,625	9,673	402,552
Total Special Trade Construction (42)	*1,150,330*	*185,736*	*1,652,972*	*2,989,038*	*666,403*	*10,608*	*3,666,049*
Total Construction (41-42)	**3,700,617**	**724,737**	**4,488,337**	**8,913,692**	**2,764,614**	**11,687**	**11,689,992**

PUBLIC SECTOR ENTERPRISES—CONSTRUCTION EXPENDITURE BY TYPE OF CONSTRUCTION ACTIVITY AND LEVEL OF GOVERNMENT, AUSTRALIA AND STATE, 1978-79

($'000)

	Building						
Type of Government	*Houses*	*Other residential buildings*	*Non-residential buildings*	*Total building*	*Total Non-building*	*Demolition*	*Total value of expenditure on construction activity*
Commonwealth Government	11,672	1,948	234,331	247,952	676,372	np	np
State Government	163,605	34,276	630,385	828,266	997,749	np	np
Local Government	4,727	3,022	123,672	131,420	781,882	np	np
Total Australia	**180,004**	**39,246**	**988,389**	**1,207,639**	**3,456,004**	**736**	**4,664,380**

BIBLIOGRAPHY

ABS Publications

Monthly Summary of Statistics, Australia (1304.0)
Digest of Current Economic Statistics, Australia (monthly) (1305.0)
Building Approvals, Australia (monthly) (8731.0)
Building Activity, Australia: Dwelling Unit Commencements (Preliminary Estimates) (quarterly) (8750.0)
Building Activity, Australia (Summary) (quarterly) (8751.0)
Building Activity, Australia (quarterly) (8752.0)
Construction (Other Than Building) Activity, Australia (quarterly) (8761.0)

Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statistician in each State.

The annual reports of the Commonwealth and State Government Housing Authorities show further details of government activities in the field of housing.

CHAPTER 20

TRANSPORT AND COMMUNICATION

This chapter contains information on motor vehicles; roads; road traffic accidents; railways; shipping; air transport; bus, train and ferry services; postal services, internal and overseas telecommunication services; radio communication stations; broadcasting and television; and government bodies concerned with these activities.

More detailed figures and particulars for earlier years are included in the publications listed at the end of the chapter.

TRANSPORT ORGANISATIONS

The Australian Transport Advisory Council

In April 1946, Commonwealth and State Governments agreed to establish a co-ordinating and advisory committee at Ministerial level whose principal functions were to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (ATAC), thus established, now comprises the Commonwealth Minister for Transport and the Minister for Territories and Local Government, each State Minister responsible for transport and roads, and the Northern Territory Minister for Transport and Works. The New Zealand Minister responsible for transport attends as an observer. Chairmanship of the Council is the responsibility of the host Minister.

The Council has, on a number of occasions since its inception, reviewed and refined its procedures and operations. At present it meets at least twice each year and its primary role is to consider policy matters relating to transport operations, co-ordination and development. Its decisions are reached by consensus of all members. Council's functions are to initiate discussion and report on any matter raised by Council members and to advise on matters which will tend to promote a better co-ordination of, or research in, transport development for the benefit of Australian transport authorities and agencies.

Matters which Council considers include: road safety, motor vehicle standards and safety features, motor vehicle emissions, driver licensing improvement and road user performance, road planning and funding, urban transport arrangements and funding, construction and operation of interstate railway links, aviation matters, transport economics and research, and the publication of comprehensive surveys on particular aspects of Australian transport.

The Council is advised on these matters by the following four policy groups: the *Co-ordinating and General Transport Group* (C & G), comprising principal Ministerial advisers, such as the Permanent Heads of the relevant Departments, which deals with overall issues of policy co-ordination and development as well as topics which do not fall within the terms of reference of the other Groups. (The *ATAC Agenda Sub-Committee* (AASC) reports to C & G, and recommends on the agenda for ATAC meetings and on ATAC's future work program); the *Railway Group*, comprising State and Australian National Railway Commissioners, together with Commonwealth Government representatives, advises on all railway matters considered by the Council; the *Road Group*, comprising State Road Commissioners together with Commonwealth Government officials, advises the Council on matters concerned with the construction and maintenance of all classes of roads and their financing. The *Motor Transport Group* (MTG), consisting of the principal State officials in the motor vehicle safety and regulatory areas, together with Commonwealth Government representatives, advises the Council on all matters arising from the work of the technical advisory committees and on vehicle safety standards, technical standards and on-road operation.

Through MTG the Council is also advised by the following technical committees: the *Vehicle Standards Advisory Committee* (VSAC); the *Advisory Committee on Road User Performance and Traffic Codes* (ACRUPTC); the *Advisory Committee on Vehicle Emmissions and Noise* (ACVEN)—this committee reports jointly to ATAC and the *Australian Environment Council* (AEC); the *Advisory Committee on Road Trauma* (ACRT); and the *Publicity Advisory Committee on Education in Road Safety* (PACERS). In addition to these technical committees, the *Advisory Committee on the Transport of Dangerous Goods* (ACTDG) reports to the Co-ordinating and General Transport Group.

The ACRT was established by ATAC in February 1983 to investigate the medical, psychological and social aspects of road accidents, with particular attention to the causes of road accidents including driver behaviour. The VSAC was established by ATAC in July 1983, replacing the former *Advisory Committee on Safety in Vehicle Design* and the *Advisory Committee on Vehicle Performance*.

In 1969, ATAC established the *Australian Motor Vehicle Certification Board* to advise State and Territory registering authorities on compliance by new motor vehicles with Australian Design Rules (ADRs). The Board's principal function is to issue Compliance Plate Approvals based on manufacturers' submissions that a vehicle complies with those rules applicable at its date of manufacture. Compliance with ADRs is a prerequisite to vehicle registration throughout Australia. The Board reports to ATAC annually.

The four policy Groups, the AMVCB and the technical advisory committees are all chaired by a Commonwealth representative.

Transport Industries Advisory Council

The Transport Industries Advisory Council (TIAC) was formed following the March 1971 Australian Transportation Conference. TIAC, an access channel between industry and the Commonwealth Minister for Transport, provides advice and comment to the Minister on policy issues as well as recommendations related to improving transport systems in Australia, including aviation.

The 30 members (as at 30.6.83) of TIAC are drawn from senior management in all modes of transport, major consumers, Government bodies and unions. The Minister appoints members on the basis of personal expertise. New members, appointed annually, serve on the Council for extendable terms of three years. The full Council, which meets four times a year, operates through an Executive Committee and subject-specific Project Committees.

Examples of topics currently under consideration by TIAC include road pricing, open registry shipping, need for a national transport strategy, ship repair, truck safety, effect of Offshore Constitutional Settlement on the operation of ships, ARRDO Reports on Rail industrial relations training, undeclared hazardous cargo, road tanker driver/operator training, owner-drivers, consultative mechanisms in the rail industry and second Sydney Airport. TIAC is also undertaking a review of the Transport Indicators with the Bureau of Transport Economics.

Marine and Ports Council of Australia

The Marine and Ports Council of Australia (MPCA) provides an advisory forum for Commonwealth and State Governments in which to discuss initiatives and developments in marine and port matters. Membership comprises the Commonwealth Minister for Transport (Chairman) and State and Territory Ministers whose portfolios include responsibility for port and marine matters.

Evolving from six meetings of a Commonwealth/State Ministerial Council for Port Development and Marine Affairs, the MPCA was convened for the first time in May 1976, bringing together Commonwealth and State policy-making machinery in relation to ports, the administration of shipping matters, cargo movements, shipping and marine laws, marine pollution control, safety and consultation on treaties. The Council now meets annually.

To assist the Council in its deliberations there exists a Committee of Advisers comprising Commonwealth, State and Territory ministerial advisers, generally at permanent head level or equivalent, who are responsible for marine and port matters. This Committee makes recommendations to Ministers on matters referred to them by Ministers or from within the Committee. In addition, several standing and ad hoc Working Groups have been established to report and make recommendations to Advisers on legal, technical, operational and administrative issues of relevance to the Council's activities.

Aviation Industry Advisory Council

The Aviation Industry Advisory Council (AVIAC) was established in 1978 to enhance the level of consultation between the aviation industry and the Government. The Council provides advice to the Commonwealth Minister for Aviation on policies, plans and programs relating to the aviation industry within Australia, promotes the continuing development of a safe, efficient, economic aviation industry, and provides a forum for discussion of important matters of joint concern to the aviation industry and Government.

Membership of the Council consists of the Commonwealth Minister for Aviation (Chairman); Secretary to the Department of Aviation; Chairman of Qantas Airways Ltd; Chairman of Australian National Airlines Commission (TAA); Chairman of Regional Airlines Association of Australia Ltd; Chairman of East-West Airlines; National Chairman of the General Aviation Association; Joint Chairman of Ansett Transport Industries Ltd; National President of the Royal Federation of Aero Clubs of Australia and President of the Aircraft Owners and Pilots Association of Australia.

The AVIAC has established a Committee of Advisers to assist in the analysis and preparation of matters to put to the Council for deliberation and decision.

The Bureau of Transport Economics

The Bureau of Transport Economics (BTE) is a professional research body which undertakes independent studies and investigations to assist the Commonwealth Government in formulating policy relating to all modes of transport.

The primary function of the BTE is to advise the Commonwealth Government on the economic, financial and technical aspects of air, road, rail and sea transport in Australia. In pursuit of this overall function, the BTE analyses the nature, capacity, performance and financing of transport systems. It also investigates the economic and resource allocation implications of such systems. The BTE has a secondary function of providing assistance to State and local governments, Commonwealth and State instrumentalities and the private sector to identify and address transport problems.

Although formally linked to the Commonwealth Department of Transport, the BTE has a considerable degree of professional and administrative autonomy and reports directly to the Minister for Transport on its program of research work.

SHIPPING

Control of shipping

Commonwealth Government navigation and shipping legislation

Commonwealth Government Acts concerned with shipping are: the *Navigation Act* 1912, the *Sea-Carriage of Goods Act* 1924, the *Seamen's Compensation Act* 1911, the *Seamen's War Pensions and Allowances Act* 1940, the *Pollution of the Sea by Oil Act* 1960, the *Pollution (Shipping Levy) Act* 1972, the *Pollution (Shipping Levy Collection) Act* 1972, the *Australian Shipping Commission Act* 1956, the *Beaches, Fishing Grounds and Sea Routes Protection Act* 1932, the *Submarine Cables and Pipelines Protection Act* 1963, the *Lighthouses Act* 1911, the *Explosives Act* 1961, the *Inter-State Commission Act* 1975, the *King Island Harbour Agreement Act* 1973, the *King Island Shipping Service Agreement Act* 1974, the *Ship Construction Bounty Act* 1975, the *Trade Practices Act*, 1974, Part X, the *Shipping Registration Act* 1981.

Navigation Act 1912 as Amended

One of the largest Commonwealth Acts, the *Navigation Act*, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Organisation (IMO).

Many of the 43 sets of Regulations under the Act are being replaced by a system of Marine Orders.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as follows:

Masters and seamen. Some sections deal with the examination of masters, mates and engineers for certificates of competency. Other sections ensure that appropriate conditions apply to crews serving on ships by providing for the supervision of the engagement, discharge and payment of wages; discipline at sea; the settlement of wages and other disputes; the return to their home port of distressed seamen; taking charge of wages and effects of deceased seamen and of those who have deserted or been left behind; and enquiries into deaths at sea. These matters are administered by Mercantile Marine Offices established at numerous ports. The health of seamen is cared for by the prescription of scales of medicines and medical stores to be carried by ships, and there are provisions to give effect to International Labour Organisation Convention requirements for the accommodation of crews. Plans for new or altered accommodation in ships have to be approved by a Crew Accommodation Committee.

There are requirements for the manning of ships, designed to ensure that sufficient officers and men are carried for safety and operational purposes. Manning disputes are dealt with by statutory Committees of Advice. The Act provides for a Marine Council to advise the Minister on the suitability of persons for engagement as seamen.

Ships and shipping. There are particularly important provisions dealing with ship safety in such matters as survey of ships, load lines, life-saving and fire appliances, prevention of collisions, and carriage of potentially dangerous cargoes. Whilst in Australia, all ships which trade interstate or overseas come under the survey provisions of the Navigation Act and require certificates issued by the Department of Transport unless they are registered in a country which is a party to the Convention concerned and hold valid certificates issued by their Governments and conforming to the requirements of the Safety of Life at Sea and Load Lines Conventions. There is power to detain any ship the condition of which does not conform with the conditions set out in its certificate or which appears to be overloaded or otherwise unseaworthy.

Passengers. These provisions deal with matters necessary or convenient for regulating the carriage of passengers in respect of such matters as numbers that may be carried, accommodation and health aspects.

Offshore industry. These provisions, which came into force on 1 February 1983, deal with offshore industry vessels and offshore industry mobile units. Marine Orders giving effect to IMO resolutions on this sector of the marine industry are in the course of preparation.

Coasting trade. Under the coasting trade provisions of the *Navigation Act*, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates. The Act does not restrict the class of ships which may obtain a licence. It is open to any vessel irrespective of the registry to obtain a licence on compliance with this condition and to operate in the Australian coastal trade subject to permission being given for the importation of the vessel under the Customs (Prohibited Imports) Regulations where necessary. Provision exists for unlicensed vessels to operate in the coasting trade under single voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade. Strict control is exercised over the issue of permits for the carriage of coastal cargoes.

Wrecks and salvage. There are provisions in relation to wrecks and salvage, covering preservation of life and of the wreck and its cargo and related matters.

Prevention, etc., of pollution by oil of the Australian coast, coastal waters and reefs. Under these provisions, where oil is escaping, or likely to escape, from a ship, the Minister is empowered to take action to prevent or reduce pollution of the area.

Limitation and exclusion of shipowners' liability. These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

Courts of Marine Inquiry. There are provisions for the holding of Courts of Marine Inquiry to investigate the circumstances attending any casualties to ships that come within Commonwealth legislative authority, usually following a preliminary investigation. Such courts are provided with power to examine all the circumstances and to deal with the certificates of ships' officers found to have been at fault.

Shipping Registration Act 1981

The *Shipping Registration Act* 1981 received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the *U.K. Merchant Shipping Act* 1894 under which ships in Australia were registered as British ships. The Act provides for all ships on the British register in Australia to be automatically transferred to the new Australian register. The Act has two basic objectives namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership.

Taken in order in which they appear in the Act, the main substantive matters are as follows:

Registration of Ships: This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

Transfers, transmissions and mortgages. This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission transfer and discharge of mortgages and the entry of this information into the Register.

Administration. This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

Register of ships. This part deals with the maintenance, rectification and inspection of the Register.

Transitional provisions. This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law.

Australian Shipping Commission

The Commission was established by the *Australian Coastal Shipping Commission Act* 1956. Its role has been to establish, maintain and operate interstate, overseas and territorial shipping services. In October 1974 the Commission's title was changed to the Australian Shipping Commission to reflect the increasing importance of its overseas trading activities. In 1980 the Australian Shipping Commission Act was amended to increase the Commission's borrowing powers and give it greater flexibility in having freight rates set.

As at 30 June 1983 the Commission, operating as the Australian National Line, owned and/or operated a fleet of thirty-three vessels. The fleet included 19 vessels engaged in overseas trades comprising 1 unitized/vehicular ship of 20,681 tonnes deadweight; 4 container ships totalling 106,526 tonnes deadweight; 5 vehicle deck cargo ships totalling 106,306 tonnes deadweight and 9 bulk carriers totalling 672,198 tonnes deadweight.

The fleet also included 14 vessels engaged in coastal trades comprising one vehicle deck passenger ship, the *Empress of Australia* of 2735 tonnes deadweight, 2 ro-ro ships of 12,034 tonnes deadweight each; 5 vehicle deck cargo ships totalling 28,247 tonnes deadweight; 2 coal-fired bulk carriers the *River Boyne* and *River Embley* of approximately 75,000 tonnes deadweight each and 4 other bulk carriers each less than 20,000 tonnes deadweight, totalling 65,739 tonnes deadweight.

The line operated specialised terminals at Adelaide, Melbourne, Burnie, Devonport, Bell Bay, Sydney, Port Kembla, Brisbane, Townsville and Cairns.

The *Empress of Australia* carried 122,834 passengers between Melbourne and Devonport together with 36,029 tourist vehicles during the year ending 30 June 1983.

Shipbuilding Assistance

The shipbuilding industry in Australia has been assisted by the Government since the introduction of the shipbuilding subsidy scheme in 1947. The level of subsidy has been determined by the Government on the basis of inquiries into the industry by the former Tariff Board and, more recently, by the Industries Assistance Commission.

In May 1977, the Government sent a reference to the Commission on assistance to be accorded to the production of vessels under 6,000 tg. The Commission reported to the Government on 25 July 1979 and on 29 November 1979 the Government announced new, simplified assistance arrangements for the Australian shipbuilding industry, with the introduction of the new *Bounty (Ships) Act* on 1 July 1980.

Under this Act, bounty continues to be accorded to the production in Australia of vessels over 150 gross construction tons, or over 21 metres in the case of fishing vessels. Bounty is payable on a 'cost of construction basis', at a rate of 27½ per cent, phasing down to a long-term rate of 20 per cent to apply from 1 July 1986.

Vessels built at major yards include small cargo vessels, offshore supply vessels, passenger ferries, fishing vessels, dredgers and barges. In addition, there are numerous smaller yards building non-bountiable vessels such as pleasure craft, small fishing vessels, and other small craft. Construction of large ships in Australia ceased in 1978.

In 1982–83 a total of 40 vessels were completed at Australian yards (as compared with 55 in 1981–82 and 53 in 1980–81).

Total financial assistance to the Australian shipbuilding industry in 1982–83 amounted to $25.6m (as compared with $26.8m in 1981–82 and $17.3m in 1980–81).

Importation of Ships

The control of imports forms an integral part of the Government's shipbuilding assistance arrangements, complementing the bounty legislation. Under the Customs (Prohibited Imports) Regulations all ships are 'prohibited imports' and may not be imported into Australia except with the written permission of the Minister for Transport. For shipbuilding policy purposes, importation is permitted in the case of new vessels, second-hand vessels outside the size range 70 tonnes to 10,000 tonnes, and vessels of a type not available new from Australian yards.

Stevedoring Industry

In December 1977, legislation was introduced which provided for new administrative, financial and industrial arrangements for the stevedoring industry and abolished the Australian Stevedoring Industry Authority. The arrangements give the parties directly involved in the industry greater responsibility in the industry's affairs.

The Stevedoring Industry Finance Committee is responsible for the disbursement of funds collected through statutory man-hour and cargo levies.

A federal co-ordinating committee comprising representatives of the employers and the Waterside Workers' Federation (WWF) and Broken Hill Pty Ltd (BHP) and the Australian National Line oversees the operation of arrangements agreed to in the General Agreement between employers and the WWF. At the port level such matters are handled by Port Co-ordinating Committees set up in the major ports.

Under section 85A of the *Conciliation and Arbitration Act* 1904 a Port Conciliator Service was created to assist parties to an industry award to implement the procedures of that award for the prevention or settling of disputes.

A non-statutory Stevedoring Industry Consultative Council chaired by Sir Alan Westerman, CBE, has been established to provide a forum for discussion and liaison between government(s), user interests and the operating sections of the industry. The Chairman is appointed by the Commonwealth Government.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act* 1977, the *Stevedoring Industry Levy Act* 1977, the *Stevedoring Industry Levy Collection Act* 1977, the *Port Statistics Act* 1977 and sections 85A, 86, 87 of the *Conciliation and Arbitration Act* 1904.

Tasmanian Freight Equalisation Scheme

The Commission of Inquiry into Transport to and from Tasmania in its report published in March 1976 found that because of Tasmania's physical separation from the mainland by sea, Tasmanian shippers suffer a cost freight disability in moving non-bulk cargoes by sea between Tasmania and the mainland.

Following on from the report, the Commonwealth Government introduced, with effect from 1 July 1976, the Tasmanian Freight Equalisation Scheme. The Scheme is designed to equalise door-to-door freight costs of moving certain eligible commodities between Tasmania and the mainland by sea with those for moving similar commodities over comparable interstate mainland rail and road routes.

The northbound component applies to Tasmanian consignors of specified goods by sea that are bought for use or exported for sale on the mainland. Under the southbound component certain producer raw materials, machinery and equipment are eligible for assistance. The northbound component was introduced in July 1976 and the southbound component in July 1977. Assistance under the latter applied to shipments made from 1 July 1976.

In 1982–83 assistance provided under the Scheme for northbound cargoes totalled $25.8m, and $1.4m in respect of southbound cargoes. Since its inception, assistance provided under the Scheme up to the end of 1982–83 totalled $175.8 million.

Responsibility for the administration of the Scheme lies within the Transport portfolio.

Revised rates of assistance for northbound cargoes were introduced on 1 July 1978 and revised southbound rates on 1 March 1980 following reviews of freight costs by the Bureau of Transport Economics. The Government has announced that the scheme is to be reviewed by the recently established Inter-State Commission.

Trade Practices Act 1974 (Part X—Overseas Cargo Shipping)

The Overseas Cargo Shipping provisions of the *Trade Practices Act* (Part X) are administered by the Transport portfolio.

Part X establishes conditions for the operation of outwards shipping conferences and individual shipowners operating in Australia's outwards trades. Conference agreements between several shipowners in a particular trade make provision for the fixing of common freight rates. They may also include provisions for pooling arrangements and shares of the trade and rationalised sailing schedules.

Part X exempts conferences from the generally applicable anti-restrictive provisions of the Act, and seeks to ensure adequate safeguards to protect shippers through:

- requiring the filing of outwards conference agreements;
- requiring shipowners to give undertakings to hold meaningful negotiations with the designated shipper body, the Australian Shippers' Council (ASC);
- providing for disapproval of a conference agreement to be exercised by the Governor-General on a number of prescribed grounds, such as a failure on the part of the shipowner to comply with an undertaking, lack of due regard to the need for overseas shipping services to be efficient, economical and adequate, prevention or hindrance of an Australian flag operator from engaging efficiently in overseas cargo shipping to a reasonable extent.

Comparable provisions apply to individual shipowners who are not party to a conference agreement.

Marine Pollution

The *Protection of the Sea (Discharge of Oil from Ships) Act* 1981, Part VIIA of the *Navigation Act* 1912 and the *Protection of the Sea (Shipping Levy)* and *(Shipping Levy Collection) Acts* 1981 currently provide the Commonwealth power to deal with matters relating to marine oil pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution and makes provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Three important Acts which will apply the provisions of three International Pollution Conventions are expected to be proclaimed in 1984. The *Protection of the Sea (Civil Liability) Act* 1981, the *Protection of the Sea (Powers of Intervention) Act* 1981, and the *Protection of the Sea (Prevention of Pollution from Ships) Act* 1983 will implement improved provisions concerning, respectively, limitation of liability for oil pollution damage for certain ships; empowering the Minister or his delegate to intervene on the high seas and in territorial waters to prevent, limit and combat pollution by oil and specified noxious substances; and to prohibit or control discharges of oil or noxious liquid substances at sea, and require the provision of control equipment and operational procedures on ships.

Maritime Industry Commission of Inquiry

For details *see* Year Book No. 61, pages 370–1.

Collection and presentation of statistics

Basic Documents

From 1 July 1966 shipping statistics have been compiled by the Australian Bureau of Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port.

On 1 July 1979 revised Bureau of Customs forms (B380/B381) came into operation bringing changes in concepts and definitions. At the same time improvements were made in the coverage of the shipping and cargo statistics collection. Consequently statistics for 1979 80 onwards are not always comparable with data for previous periods.

Scope of the Statistics

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics, as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tonnes and under.

Period Covered by the Statistics

The shipping statistics presented relate to overseas vessels arriving at or departing from Australian ports carrying international cargo, within the financial year.

Vessel Characteristics

Vessel recording

Vessel movement statistics are recorded as "Vessel Number" and "Vessel Calls". "Vessel Number" relates to the number of overseas direct arrivals to, or departures from Australia. "Vessel Calls" relates to the number of port visits that an overseas vessel makes in Australia. For example, an overseas vessel which arrives direct in Brisbane and makes a further call in Sydney before departing for an overseas port from Melbourne is counted as one under "Vessel Number" for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

Vessel type

All vessels are classified from *Lloyd's Register of Shipping* according to one of 13 vessel types which describe them in terms of their structure or design. These 13 vessel types are amalgamated into four broad categories as follows:

Category	*Vessel types*
(a) general cargo vessels	Container Ships
	Roll on—Roll off
	General Cargo Ships
	Livestock Cargo
(b) tankers	Gas carriers: refrigerated
	Gas carriers: non-refrigerated
	Tankers: Crude oil and petroleum products
	Tankers: Chemical and specialised
(c) bulk carriers	Dry Bulk Carrier
	Bulk/oil Carrier
(d) other vessels	Multi-purpose
	Passenger
	Other

Type of service

Vessels are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

(a) liner service, (according to conference and non-conference) relates specifically to a vessel which is operated by a carrier providing services on a specified route on a relatively regular basis; and

(b) other service, which refers to all vessels operating in other than a liner service.

Conference vessels—A 'conference' is an association of shipowners which regulates the freight rates and terms and conditions of carriage of goods in any particular trade. Conferences only operate liner services and not charter services. Conference arrangements normally include provisions for sharing the trade, rationalising sailing schedules and pooling arrangements for resources and/or revenue.

Country of registration

The country of registration or flag of the vessel refers to the country in which the vessel is registered according to *Lloyd's Register of Shipping*.

Recording of cargo loaded or discharged

Returns for arrivals show cargo discharged, and returns for departures show cargo loaded, in terms of revenue tonnes. A revenue tonne is the unit of quantity predominantly used in the shipping industry. It is the basis on which freight is charged and is obtained by adding mass (tonnes weight) and volume (cubic metres) units.

Container cargo

Statistics of container cargo refer only to cargo shipped in 20 ft or 40 ft standard international containers. To provide a standard measure, all statistics relating to containers are expressed in terms of 20 ft units. A 40 ft container is therefore recorded as two twenty-foot equivalent units (or TEU's).

Country of loading or discharge of overseas cargo

In statistics of overseas shipping and cargo, the country of loading, or discharge, of overseas cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transhipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

Trade area

Ports at which vessels load or discharge cargo are allocated to their respective countries, which are in turn allocated to trade areas in accordance with the Classification of Trade Areas for Cargo Statistics.

Units of measurement

The cargo carrying capacity of vessels has in the past been measured in terms of registered net tonnage. However, as from 1 July 1979 this statistic has been replaced by deadweight tonnage (DWT).

Deadweight tonnage. A measure of the total mass (weight, in tonnes) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

Gross tonnage. A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempt, in units of 1 ton per 2.83 cubic metres.

Australian trading vessels

The following table shows particulars of all Australian trading vessels of 150 gross tons or more engaged in the regular overseas, interstate or intrastate services at 30 June 1983.

AUSTRALIAN TRADING VESSELS OF 150 GROSS TONS OR MORE
30 JUNE 1983

(*Source:* Department of Transport)

Vessels	*Number*	*DWT*	*Gross Tons*
Intrastate—			
Australian owned, Australian registered	17	307,121	203,143
Intrastate fleet	*17*	*307,121*	*203,143*
Interstate—			
Australian owned, Australian registered	44	1,076,849	687,715
Overseas owned, Australian registered	8	132,940	92,354
Overseas owned, overseas registered	5	299,119	163,293
Interstate fleet	*57*	*1,508,908*	*943,362*
Coastal fleet	**74**	**1,816,029**	**1,146,505**
Overseas—			
Australian owned, Australian registered	18	648,115	426,522
Overseas owned, Australian registered	5	589,541	351,764
Overseas owned, overseas registered	7	225,306	145,751
Overseas fleet	**30**	**1,462,962**	**924,037**
Total Australian fleet	**104**	**3,278,991**	**2,070,542**

Overseas shipping

The following table shows the movement of vessels and cargo to and from overseas countries, for the years 1976–77 to 1981–82.

OVERSEAS SHIPPING: VESSEL AND CARGO MOVEMENTS

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Arrivals—						
vessel details						
vessel number	5,830	5,615	5,677	6,249	5,995	5,895
DWT ('000 tonnes)	n.a.	n.a.	n.a.	247,218	237,223	234,041
cargo discharged						
revenue tonnes ('000)	28,329	26,981	28,637	31,028	32,480	31,421
gross weight ('000 tonnes)	n.a.	n.a.	n.a.	26,219	26,767	25,815
Departures—						
vessel details						
vessel number	5,824	5,668	5,655	6,168	5,922	5,838
DWT ('000 tonnes)	n.a.	n.a.	n.a.	246,555	234,618	236,718
cargo loaded						
revenue tonnes ('000)	167,118	166,700	167,304	188,681	179,413	176,978
gross weight ('000 tonnes)	n.a.	n.a.	n.a.	187,778	178,514	176,156

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of vessels.

OVERSEAS SHIPPING: VESSEL DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION, 1981–82

	Departures		*Arrivals*	
Country of registration	*Vessel number*	*DWT ('000 tonnes)*	*Vessel number*	*DWT ('000 tonnes)*
Antilles (Netherlands)	4	65	4	65
Australia	172	8,779	165	8,960
Belgium Luxembourg	22	1,091	17	965
Bermuda	22	240	11	182
China excl. Taiwan	189	5,546	194	5,536
— Taiwan	37	2,015	38	2,244
Denmark	88	1,210	99	1,522
Finland	10	331	11	366
France	23	1,703	20	1,527
Germany, Federal Republic of	152	3,092	151	2,818
Greece	387	14,174	399	14,372
Hong Kong	150	5,481	155	6,415
India	87	2,618	83	2,489
Italy	19	680	17	583
Japan	1,234	82,492	1,257	80,004
Korea, Republic of	174	6,665	174	6,441
Kuwait	26	1,311	27	1,355
Liberia	731	35,893	748	36,633
Malaysia	53	975	52	987
Nauru, Republic of	6	151	11	282
Netherlands	78	1,256	82	1,239
New Zealand	113	1,183	127	1,335
Norway	186	8,704	178	8,370
Panama	692	19,623	701	19,577
Philippines	31	1,485	31	1,487
Poland	15	251	9	147
Singapore, Republic of	223	5,497	223	5,401
South Africa, Republic of	7	134	9	178
Spain	2	265	–	–
Sweden	35	1,061	30	957
Thailand	1	–	1	–
Turkey	2	83	1	61
United Kingdom	472	14,682	465	14,318
United States of America	28	1,110	29	1,010
U.S.S.R.	124	1,967	133	2,083
Other countries	243	4,903	243	4,132
Total All Countries	**5,838**	**236,718**	**5,895**	**234,041**
With cargo	5,173	216,321	2,286	50,607
In ballast	665	20,397	3,609	183,434

Harbour boards and trusts

For detailed information *see* the individual State Year Books.

Shipping at principal ports

The following table shows the total movement of overseas shipping and cargo at Australian ports, 1981–82.

OVERSEAS VESSEL AND CARGO MOVEMENTS AT AUSTRALIAN PORTS 1981–82

	Departures		*Cargo loaded*	*Arrivals*		*Cargo discharged*
	Vessel details			*Vessel details*		
Australian port	*Vessel calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Vessel calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
New South Wales—						
Sydney	1,381	29,525	5,867	1,431	30,881	3,591
Botany Bay	569	14,766	497	548	14,595	2,957
Newcastle	557	20,978	15,022	579	20,996	1,083
Port Kembla	221	10,817	6,723	233	10,901	447
Other	38	1,077	807	38	1,074	4
Total	*2,766*	*77,162*	*28,916*	*2,829*	*78,448*	*8,082*
Victoria—						
Melbourne	1,698	31,981	2,649	1,762	34,046	2,882
Geelong	268	7,896	2,666	287	8,218	1,967
Westernport	189	4,382	1,924	192	4,334	63
Other	105	2,807	848	106	2,807	227
Total	*2,260*	*47,066*	*8,088*	*2,347*	*49,405*	*5,139*
Queensland—						
Brisbane	1,039	19,886	2,494	1,029	20,229	1,329
Gladstone	313	15,420	11,200	328	15,398	434
Hay Point	217	20,686	14,207	216	20,288	—
Townsville	278	4,415	1,096	278	4,392	324
Weipa	102	5,202	4,323	103	5,088	53
Other	367	5,070	2,580	376	5,170	170
Total	*2,316*	*70,678*	*35,900*	*2,330*	*70,565*	*2,310*
South Australia—						
Port Adelaide	566	10,210	1,197	539	9,656	570
Port Lincoln	76	1,881	590	80	1,875	115
Port Pirie	83	1,376	668	93	1,436	18
Port Stanvac	38	2,777	359	45	2,989	1,349
Thevenard	52	835	622	58	937	—
Whyalla	37	672	261	37	672	169
Other	63	1,554	611	64	1,505	92
Total	*915*	*19,305*	*4,308*	*916*	*19,070*	*2,312*
West Australia—						
Fremantle	972	23,052	4,719	1,016	24,460	4,706
Bunbury	133	3,782	2,246	129	3,591	162
Cape Cuvier	12	700	678	13	760	—
Dampier	368	34,650	30,524	370	33,580	88
Geraldton	180	3,648	1,727	180	3,598	122
Port Hedland	365	33,838	30,025	387	35,288	257
Port Walcott	125	16,315	14,803	121	15,277	35
Yampi Sound	25	2,247	2,205	31	2,413	—
Other	277	4,400	1,967	279	4,426	289
Total	*2,457*	*122,632*	*88,895*	*2,526*	*123,394*	*5,659*
Tasmania—						
Hobart	153	2,250	670	144	2,177	153
Launceston	113	3,007	1,634	112	2,876	90
Port Latta	25	2,157	1,949	25	2,129	—
Other	121	2,313	395	120	2,290	87
Total	*412*	*9,726*	*4,647*	*401*	*9,473*	*330*
Northern Territory—						
Darwin	111	1,270	18	110	1,335	484
Other	140	5,387	3,646	140	5,318	592
Total	*251*	*6,657*	*3,664*	*250*	*6,653*	*1,076*
Port not available	308	4,714	1,739	189	1,905	907
Total all ports	**11,685**	**357,942**	**176,156**	**11,788**	**358,910**	**25,815**

Shipping cargo

The following table shows details of container and non-container cargo loaded and discharged at Australian ports during 1981–82.

OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1981–82

('000 revenue tonnes)

	Loaded			*Discharged*		
Port	*Container cargo*	*Other cargo*	*Total*	*Container cargo*	*Other cargo*	*Total*
New South Wales—						
Sydney	767	5,251	6,018	1,959	2,988	4,947
Botany Bay	383	151	534	1,052	2,388	3,440
Newcastle	7	15,015	15,022	3	1,088	1,091
Port Kembla	–	6,723	6,723	–	446	447
Other	–	807	807	–	5	5
Total	*1,157*	*27,947*	*29,104*	*3,014*	*6,916*	*9,930*
Victoria—						
Melbourne	2,032	1,029	3,061	2,983	2,083	5,065
Geelong	12	2,655	2,667	14	1,961	1,975
Westernport	–	1,924	1,924	–	63	63
Other	–	855	855	–	230	230
Total	*2,044*	*6,463*	*8,507*	*2,997*	*4,337*	*7,334*
Queensland—						
Brisbane	451	2,096	2,547	418	1,544	1,962
Gladstone	–	11,200	11,200	–	441	441
Hay Point	–	14,207	14,207	–	–	–
Townsville	38	1,058	1,097	5	387	392
Weipa	–	4,323	4,323	–	53	53
Other	6	2,575	2,581	2	169	170
Total	*495*	*35,459*	*35,954*	*424*	*2,594*	*3,019*
South Australia—						
Port Adelaide	203	1,040	1,243	125	794	919
Port Lincoln	–	590	590	–	115	115
Port Pirie	1	669	670	–	18	18
Port Stanvac	–	359	359	–	1,349	1,349
Thevenard	–	622	622	–	–	–
Whyalla	–	261	261	4	166	170
Other	–	611	611	–	92	92
Total	*204*	*4,151*	*4,355*	*129*	*2,534*	*2,663*
West Australia—						
Fremantle	394	4,371	4,766	425	4,621	5,045
Bunbury	–	2,254	2,254	–	162	162
Cape Cuvier	–	678	678	–	–	–
Dampier	–	30,524	30,524	–	88	88
Geraldton	–	1,725	1,727	3	120	123
Port Hedland	–	30,025	30,025	–	263	263
Port Walcott	–	14,803	14,803	–	35	35
Yampi Sound	–	2,205	2,205	–	–	–
Other	26	1,942	1,968	3	290	293
Total	*422*	*88,529*	*88,951*	*430*	*5,579*	*6,009*
Tasmania—						
Hobart	–	673	673	–	184	184
Launceston	1	1,635	1,636	–	96	96
Port Latta	–	1,949	1,949	–	–	–
Other	73	328	402	13	83	96
Total	*74*	*4,585*	*4,659*	*13*	*362*	*375*
Northern Territory—						
Darwin	1	24	25	2	516	518
Other	–	3,646	3,646	–	592	592
Total	*1*	*3,670*	*3,671*	*2*	*1,108*	*1,110*
Port not available	377	1,399	1,776	380	602	982
Total Australia	**4,774**	**172,204**	**176,978**	**7,389**	**24,032**	**31,421**

Overseas cargo according to major trade areas and vessel type

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas classified according to the major trade areas of the world and by vessel type.

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY VESSEL TYPE, 1981–82

('000 revenue tonnes)

Trade area	*General cargo vessels*	*Tankers*	*Bulk carriers*	*Other vessels*	*All vessels*
		Loaded			
Europe	1,338	370	27,279	51	29,037
East Asia	1,323	172	10,444	31	11,969
Japan	2,674	1,518	109,186	362	113,739
N. America-E. Coast	463	488	1,973	3	2,928
N. America-W. Coast	391	93	2,400	74	2,958
Central America	20	31	99	–	150
S. America-E. Coast	62	–	406	–	469
S. America-W. Coast	46	–	74	–	120
West Africa	–	–	–	–	–
South East Africa	128	29	324	–	480
Red Sea	257	–	1,342	1	1,600
Persian Gulf	502	283	2,296	28	3,109
West India	185	22	617	17	841
East India	90	33	461	6	590
South East Asia	1,914	627	3,218	40	5,799
New Zealand	777	453	546	–	1,776
Papua New Guinea	485	209	24	–	718
Central Pacific	156	299	25	9	490
French Pacific	68	12	70	3	153
Pacific Islands	8	1	36	–	45
Other	5	–	–	2	7
Total Loaded	**10,892**	**4,639**	**160,819**	**628**	**176,978**
		Discharged			
Europe	2,213	652	285	51	3,200
East Asia	1,292	70	102	31	1,495
Japan	3,648	237	1,930	332	6,147
N. America-E. Coast	1,097	465	524	–	2,086
N. America-W. Coast	842	183	1,723	171	2,919
Central America	5	20	22	–	47
S. America-E. Coast	95	–	18	–	113
S. America-W. Coast	9	–	–	–	9
West Africa	6	–	1	–	7
South East Africa	173	14	7	–	194
Red Sea	40	435	4	–	479
Persian Gulf	17	7,556	226	–	7,799
West India	57	141	–	–	198
East India	51	–	–	5	56
South East Asia	569	2,901	803	24	4,297
New Zealand	782	5	195	–	982
Papua New Guinea	82	7	–	–	90
Central Pacific	27	–	–	1	28
French Pacific	2	31	–	–	33
Pacific Islands	7	–	1,214	22	1,242
Other	1	–	–	–	1
Total Discharged	**11,014**	**12,718**	**7,054**	**636**	**31,421**

Overseas cargo according to country of registration of vessels

The following table shows the total overseas cargo, loaded and discharged, according to the country in which the vessels were registered.

OVERSEAS CARGO LOADED AND DISCHARGED, BY COUNTRY OF REGISTRATION OF VESSELS: AUSTRALIA

('000 revenue tonnes)

	1979–80		*1980–81*		*1981–82*	
Country of registration	*Loaded*	*Discharged*	*Loaded*	*Discharged*	*Loaded*	*Discharged*
Antilles (Netherlands)	10	277	8	81	45	34
Australia	6,254	1,545	6,876	1,330	6,649	1,381
Belgium-Luxembourg	1,334	549	1,125	222	886	196
Bermuda	586	84	451	20	155	27
China—excl. Taiwan	7,727	388	5,419	180	4,140	350
—Taiwan	2,180	42	1,201	–	1,729	17
Denmark	475	1,001	647	653	544	513
Finland	256	35	252	38	245	125
France	1,297	63	459	335	522	451
Germany, Federal Democratic Republic of	1,154	913	1,035	1,016	1,420	1,115
Greece	11,042	1,895	8,380	2,439	10,423	2,727
Hong Kong	2,225	549	1,975	624	3,850	1,073
India	2,055	152	2,349	221	2,070	77
Ireland	47	–	50	–	–	–
Italy	1,281	216	839	137	434	164
Japan	71,674	3,553	68,555	4,109	70,782	4,095
Korea, Republic of	3,369	80	3,066	303	5,712	375
Kuwait	127	51	151	–	233	78
Liberia	36,539	4,414	37,826	5,817	26,579	5,277
Malaysia	566	426	509	388	494	341
Nauru, Republic of	119	187	141	138	61	272
Netherlands	761	964	551	888	501	407
New Zealand	429	671	641	1,187	476	738
Norway	6,723	2,082	5,694	1,571	5,837	1,397
Panama	13,299	1,436	14,522	1,795	15,684	1,789
Philippines	997	240	1,305	46	1,371	72
Poland	82	144	71	156	61	81
Singapore, Republic of	2,787	812	2,786	1,054	3,335	1,206
South Africa, Republic of	230	197	195	96	68	117
Spain	114	–	–	105	108	–
Sweden	801	528	448	496	560	477
Thailand	–	134	–	197	8	5
Turkey	66	–	282	–	51	–
United Kingdom	9,413	5,606	8,214	5,446	7,315	4,849
United States of America	322	582	261	634	243	348
U.S.S.R.	1,122	310	1,291	320	1,223	526
Other Countries	1,216	904	1,838	436	3,165	722
Total All Vessels	**188,681**	**31,028**	**179,413**	**32,480**	**176,978**	**31,421**

(*a*) included in 'other countries'.

Overseas cargo according to major trade areas and type of service

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service.

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY TYPE OF SERVICE, 1981–82

('000 revenue tonnes)

	Loaded			*Discharged*		
	Liner service			*Liner service*		
Trade area	*Conference*	*Non-Conference*	*Other vessels*	*Conference*	*Non-Conference*	*Other vessels*
Europe	871	93	28,074	1,933	229	1,038
East Asia	448	204	11,317	710	537	248
Japan	775	119	112,845	1,275	205	4,667
North America—E. Coast	464	335	2,128	932	104	1,050
North America—W. Coast	294	166	2,498	762	707	1,449
Central America	16	7	128	1	1	45
South America—E. Coast	16	3	450	64	17	32
South America—W. Coast	3	3	114	7	–	2
West Africa	–	–	–	–	5	2
South and East Africa	2	105	373	35	123	36
Red Sea	52	14	1,534	–	34	445
Persian Gulf	52	50	3,007	4	4	7,791
West India	96	9	736	44	2	151
East India	48	–	543	47	–	9
S.E. Asia	606	320	4,873	330	173	3,794
New Zealand	488	29	1,260	656	25	300
Papua New Guinea	354	74	290	43	9	38
Central Pacific	48	39	403	5	13	10
French Pacific	50	22	82	–	1	32
Pacific Islands	3	10	32	–	7	1,235
Other	–	–	7	–	–	1
Total	**4,685**	**1,601**	**170,692**	**6,849**	**2,196**	**22,376**

Vessels registered in Australia

The following table shows the number of vessels registered in Australia at 30 June 1983, classified according to (i) the state in which they are registered; and (ii) the nature of the vessels registration.

SHIPS REGISTERED IN AUSTRALIA AS AT 30 JUNE 1983

(*Source:* Department of Transport)

	Nature of registration					
Location	*Demise chartered(a)*	*Commercial*	*Government*	*Fishing*	*Pleasure*	*State total*
New South Wales	2	217	1	325	1,187	1,732
Victoria	1	106	19	125	316	567
Queensland	2	101	30	564	461	1,158
Western Australia	4	97	4	416	278	799
South Australia	–	35	9	207	161	412
Tasmania	–	79	3	180	147	409
Northern Territory	–	9	2	73	96	180
Total Australia	**9**	**644**	**68**	**1,890**	**2,646**	**5,257**

(*a* A Demise charterd ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship.

The following table shows the number and gross tonnage of trading vessels of 150 tons or more registered in Australia at 30 June 1983, classified according to: (i) year of construction; (ii) type of trade in which the vessels were engaged; and (iii) vessels built in Australian or in overseas shipyards.

AUSTRALIAN-REGISTERED TRADING VESSELS, OF 150 GROSS TONS OR MORE 30 JUNE 1983

(*Source:* Department of Transport)

	Overseas and interstate vessels		*Intrastate vessels*		*Built in Australian yards*		*Built overseas*		*Total*	
Year of construction	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*	*No.*	*Gross tons*
1975 and earlier	41	534,189	11	87,006	37	421,260	15	199,935	52	621,195
1976	6	172,201	–	–	3	28,267	3	143,934	6	172,201
1977	7	246,655	1	2,851	3	46,991	5	202,515	8	249,506
1978	9	161,695	–	–	1	25,849	8	135,846	9	161,695
1979	4	97,762	–	–	–	–	4	97,762	4	97,762
1980	–	–	1	2,792	–	–	1	2,792	1	2,792
1981	6	224,251	1	1,155	–	–	7	225,406	7	225,406
1982	1	93,940	2	58,304	1	6,310	2	145,934	3	152,244
1983	1	27,662	1	51,035	–	–	2	78,697	2	78,697
Registered in Australia	**75**	**1,558,355**	**17**	**203,143**	**45**	**528,677**	**47**	**1,232,821**	**92**	**1,761,498**

Miscellaneous

Shipping casualties

Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors and when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault.

RAILWAYS

Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1981–82 a total of 127.3 million tonnes of freight was carried, an increase of 122.5 per cent over the 56.5 million tonnes carried in 1961–62. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 7.5 per cent from 443 million in 1961–62 to 412 million in 1981–82. The number of train-kilometres run during 1981–82 (150 million) was an increase of 3.4 per cent since 1961–62 (145 million), which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1982 there were 1,678 throughout Australia. Diesel-electric locomotives during 1981–82 hauled 97 million train-kilometres, while electric and other locomotives hauled 4 million train-kilometres.

The Australian National Railways Commission (ANRC) assumed full control over the Tasmanian and non-metropolitan South Australian railways on 1 March 1978. This change is reflected in the figures for the 1977–78 financial year as many data items, previously available separately from these three systems, are now included in the figures shown for the ANRC. Urban rail services in South Australia remain the responsibility of the State Transport Authority (STA) and particulars of these are shown as the South Australian railway system.

Due to changes in accounting procedures and the introduction of a multi-modal system of travel, i.e. one ticket can cover a journey involving more than one mode, the STA cannot provide, in many instances, separate particulars for train, bus and tram services operated by that authority. Where data is not separately identifiable it has been included in relevant tables in the railway section of this year book.

Railway development

Details outlining railway development in Australia are given in Year Book No. 61, page 380. One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges: 'broad' (1,600 mm), 'standard' (1,435 mm), and 'narrow' (1,067 mm). Extensive route-kilometres of 1,067 mm gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction.

Government railway systems

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transit Authority of Victoria and 'V/Met' operated by the Metropolitan Transit Authority of Victoria, Queensland Government Railways (QR), Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and Australian National Railways Commission (ANRC).

As the Australian National Railways Commission system includes routes in more than one State, and the Victorian system extends into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory. The route-kilometres of each system open for traffic, according to gauge, at 30 June 1982 is shown in the following table.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM 30 JUNE 1982

(Kilometres)

	Gauge				
System	*1600 mm*	*1435 mm*	*1067 mm*	*Dual (a)*	*Total*
New South Wales	..	(b)9,773	..	..	(b) 9,773
Victoria	(c)5,487	313	..	12	5,812
Queensland	..	(d)111	9,859	..	9,970
South Australia	141	..	..	..	141
Western Australia	..	1,228	4,226	155	5,609
National	(e)2,387	3,438	1,813	..	7,638
Australia	**8,015**	**14,863**	**15,898**	**167**	**38,943**

(a) VR operates a 1600 mm/1435 mm dual gauge line and WAGR operates a 1435 mm/1067 mm dual gauge line. (b) Includes 469 kilometres which are electrified. (c) Includes 328 kilometres of 1600 mm gauge line operating in New South Wales. Includes 417 route-kilometres which are electrified. (d) Operated by the State Rail Authority of New South Wales which is reimbursed for the cost of operations. (e) See page 458.

The following table sets out the route kilometres of each government railways system from 1977 to 1982.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM, 1977 TO 1982

(Kilometres)

30 June—	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australian National*	*Total*
1977	9,755	6,579	9,796	3,894	6,165	864	3,080	40,133
1978	9,763	6,364	9,787	(a)142	5,764	(a)	(a)7,890	39,710
1979	9,820	6,184	9,789	142	5,770	(a)	7,683	39,388
1980	9,773	6,184	9,904	142	5,773	(a)	7,687	39,463
1981	9,773	5,870	9,932	140	5,773	(a)	7,648	39,136
1982	9,773	5,812	9,970	141	5,609	(a)	7,638	38,943

(a) See page 458.

The SRA (1435 mm gauge) operates lines radiating southwest and west from Sydney, northwest from Newcastle, and north from Sydney to Brisbane. QR (1067 mm gauge) operates a coastal line from Brisbane to Cairns, with long branches inland from the major ports. VR (1600 mm gauge, with the 1435 mm gauge Albury to Melbourne line) operates a network throughout Victoria and extending into New South Wales. WAGR (1067 mm gauge) operates in south-western Western Australia, and also operates standard gauge (1435 mm) from Perth to Kalgoorlie, Esperance and Leonora. The STA (1600 mm gauge) operates railways in the Adelaide metropolitan area only. ANRC operates the non-metropolitan railways in South Australia (1600 mm and 1067 mm gauge), including the isolated

Eyre Peninsula system (1067 mm gauge), the Tasmanian main line from Hobart to Launceston, with its branches (1067 mm gauge) and the railways (1435 mm gauge) from Kalgoorlie to Broken Hill (the Trans-Australian Railway), Queanbeyan to Canberra, Port Augusta to Marree, and the new Central Australia Railway from Tarcoola to Alice Springs. Services on the line between Darwin and Larrimah, the North Australia Railway, (1067 mm gauge) were withdrawn on 30 June 1976 and the line was officially closed effective as from 11 February 1981.

With regard to urban rail, Sydney and Melbourne have major electrified suburban rail systems which include some underground lines. The Brisbane suburban system is being upgraded and electrified. Adelaide and Perth have smaller-scale, non-electric urban rail networks. Rail services in the urban and inter-urban areas of Sydney, Newcastle and Wollongong are provided by the SRA in conjunction with the Urban Transit Authority of New South Wales which has responsibility for co-ordination of transport services in these areas. Similarly, metropolitan rail services in Perth are operated by the WAGR on behalf of and at the direction of the Metropolitan Transport Trust.

See also details in Year Book No. 58, page 348.

Construction of a standard gauge connection between Adelaide and the Trans-Australian Railway at Crystal Brook was completed in December 1982, the project being undertaken by the Australian National Railways Commission. All mainland State capital cities are now connected to the standard gauge network.

The new all-weather standard gauge railway between Tarcoola, on the Trans-Australian Railway, and Alice Springs was officially opened in October 1980. Upon transfer of rail services to this new line, the narrow gauge section of the Central Australia Railway from Marree to Alice Springs was officially closed effective as from 1 January 1981.

Operations of Government railway systems

Particulars of train-kilometres, passenger journeys, passenger-kilometres, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.

Summary of operations

GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1981–82

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Australian National*	*Aust.*
Train-kilometres ('000) (*a*)—							
Suburban passenger	23,180	14,209	4,238	3,921	1,592	..	47,139
Country passenger	11,184	6,661	4,260	..	1,024	4,188	27,317
Goods (*b*)	25,595	10,266	24,198	..	8,064	7,901	76,025
Total	**59,960**	**31,136**	**32,696**	**3,921**	**10,681**	**12,089**	**150,482**
Passenger journeys ('000) (*c*)—							
Suburban	215,957	n.a.	32,592	(*g*)79,740	n.a.	..	n.a.
Country (*d*)	4,880	n.a.	1,645	..	219	610	n.a.
Total	**220,837**	**76,313**	**34,237**	**(*g*)79,740**	**n.a.**	**610**	**n.a.**
Passenger-kilometres ('000) (*e*)—							
Suburban	n.a.	n.a.	n.a.	n.a.	n.a.	..	n.a.
Country	n.a.	n.a.	n.a.	n.a.	89,631	275,926	n.a.
Total	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**275,926**	**n.a.**
Freight—							
Tonnes carried ('000) (*d*)	40,393	11,623	43,659	..	19,776	11,882	127,333
Net tonne-kilometres (million) (*f*)	10,704.9	3,426.7	13,079.1	..	4,389.8	5,731.3	37,331.8

(*a*) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes. (*b*) Includes mixed train-kilometres. (*c*) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (*d*) Inter-system traffic is included in the total for each system over which it passes. (*e*) One passenger travelling one kilometre. (*f*) One tonne carried one kilometre. (*g*) See page 458.

Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT

(Number)

	Locomotives						
System and date	*Diesel-electric*	*Electric*	*Other(a)*	*Total*	*Coaching stock*	*Goods stock*	*Service stock*
30 June 1982(*b*)							
New South Wales	445	49	80	574	2,112	11,737	1,653
Victoria	261	31	37	329	1,384	11,487	1,062
Queensland	496	..	77	573	1,093	21,748	2,526
South Australia	2	..	4	6	197	—	12
Western Australia	187	..	21	208	125	9,799	478
Australian National	287	..	4	291	152	10,451	1,308
Australia	**1,678**	**80**	**223**	**1,981**	**5,063**	**65,222**	**7,039**
30 June—							
1981 (*b*)	1,722	82	193	1,997	5,036	66,386	7,201
1980 (*b*)	1,727	81	185	1,993	5,121	67,685	7,228
1979 (*b*)	1,695	74	203	1,972	5,055	67,163	7,192
1978(*b*)	1,674	74	194	1,942	6,872	71,043	7,225
1977	1,646	74	262	1,982	7,615	75,694	6,616

(*a*) Includes non-passenger-carrying diesel power vans and steam locomotives. (*b*) Excludes jointly-owned stock.

Train-kilometres

Train-kilometres by type of service and motive power

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES 1981–82

('000 kilometres)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Australian National*	*Aust.*
Type of service—							
Passenger—suburban	23,180	14,209	4,238	3,921	1,592	..	47,139
Passenger—country	11,184	6,661	4,260	..	1,024	4,188	27,317
Goods(*a*)	25,595	10,266	24,198	..	8,064	7,901	76,025
Total	*59,960*	*31,136*	*32,696*	*3,921*	*10,681*	*12,089*	*150,482*
Type of motive power—							
Hauled by diesel-electric locomotives	32,414	15,665	29,311	..	8,684	11,244	97,318
Hauled by electric and other locomotives(*b*)	2,797	1,325	166	..	1	..	4,288
Powered coaching stock	24,749	14,146	3,219	3,921	1,996	845	48,876
Total	**59,960**	**31,136**	**32,696**	**3,921**	**10,681**	**12,089**	**150,482**

(*a*) Includes mixed train-kilometres. (*b*) Includes steam locomotives.

Total train-kilometres

TRAIN-KILOMETRES

('000 kilometres)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australian National*	*Aust.*
1976–77	57,039	33,489	30,206	10,742	12,846	1,667	5,134	151,125
1977–78	56,860	32,013	30,199	(*a*)3,982	12,596	(*a*)..	(*a*)13,152	148,801
1978–79	55,622	30,856	32,100	3,957	12,068	..	12,918	147,520
1979–80	59,356	30,795	32,589	3,977	11,759	..	12,392	150,868
1980–81	58,089	30,615	31,282	3,879	10,891	..	12,376	147,132
1981–82	59,960	31,136	32,696	3,921	10,681	..	12,089	150,482

(*a*) See page 458.

Freight traffic

Freight carried

GOVERNMENT RAILWAYS: FREIGHT CARRIED(*a*), SYSTEMS

('000 tonnes)

Commodity and year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australian National*	*Aust.*
1981-82—								
Grain	5,311	3,500	2,042	..	3,642	..	801	15,296
Other agricultural produce	769	268	2,092	..	154	..	50	3,333
Coal, coke and briquettes	22,618	487	30,067	..	1,519	..	1,814	56,505
Other minerals(*b*)	3,552	913	4,427	..	10,501	..	1,439	20,832
Iron and steel	1,994	694	780	..	9	..	787	4,264
Fertilisers	120	557	135	..	515	..	375	1,702
Cement	559	718	205	..	74	..	480	2,036
Timber	74	149	102	..	688	..	1,048	2,061
Containers	2,696	1,067	715	..	—	..	1,323	5,801
Livestock	116	52	655	..	6	..	200	1,029
All other commodities	2,583	3,215	2,441	..	2,669	..	3,565	14,473
Total	**40,393**	**11,623**	**43,659**	**..**	**19,776**	**..**	**11,882**	**127,333**
1980-81	40,440	12,721	41,504	..	20,271	..	12,345	127,281
1979-80	39,685	13,454	38,440	..	21,937	..	12,704	126,220
1978-79	33,482	11,190	36,542	..	19,288	..	10,623	111,125
1977-78	33,434	11,120	34,155	..	18,625	..	9,995	107,329
1976-77	33,777	10,971	34,237	6,402	19,003	1,644	3,909	109,943

(*a*) Inter-system traffic is included in the total for each system (including each National railway) over which it passes. (*b*) Includes sand and gravel.

Freight net tonne-kilometres

GOVERNMENT RAILWAYS: FREIGHT NET TONNE-KILOMETRES, SYSTEMS

(Million)

Commodity and year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australian National*	*Aust.*
1981-82—								
Grain	2,151.5	1,016.3	647.3	..	1,024.0	..	134.7	4,973.8
Other agricultural produce	441.1	84.9	382.2	..	68.4	..	24.9	1,001.5
Coal, coke and briquettes	2,431.0	87.5	7,992.7	..	273.7	..	475.0	11,259.9
Other minerals(*a*)	501.8	137.4	1,421.9	..	1,392.2	..	410.0	3,863.3
Iron and steel	1,438.5	244.2	245.6	..	3.8	..	710.2	2,642.3
Fertilisers	77.7	149.5	166.5	..	207.6	..	122.7	724.0
Cement	290.5	138.0	101.5	..	35.7	..	73.8	639.5
Timber	73.8	50.7	57.7	..	140.9	..	238.9	562.0
Containers	1,692.1	440.1	296.9	..	—	..	1,040.6	3,469.7
Livestock	72.6	16.7	494.5	..	3.0	..	107.2	694.0
All other commodities	1,534.4	1,061.5	1,272.3	..	1,240.5	..	2,393.5	7,502.2
Total	**10,704.9**	**3,426.7**	**13,079.1**	**..**	**4,389.8**	**..**	**5,731.3**	**37,331.8**
1980-81	10,543.4	3,703.7	11,981.7	..	4,488.6	..	5,750.9	36,468.3
1979-80	10,664.9	3,887.8	11,464.6	..	4,730.7	..	5,618.2	36,366.2
1978-79	8,776.7	3,145.3	10,925.2	..	4,178.8	..	5,029.5	32,055.5
1977-78	9,243.3	3,108.7	10,417.2	(*b*)	4,273.1	(*b*)	(*b*) 4,794.2	31,836.5
1976-77	9,320.2	3,042.2	10,286.6	1,834.0	4,532.5	247.5	2,732.4	31,995.4

(*a*) Includes sand and gravel. (*b*) See page 458.

Finance

GOVERNMENT RAILWAYS: GROSS EARNINGS(*a*), SYSTEMS, 1981–82
($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.(b)*	*W.A.*	*Australian National*	*Aust.*
Coaching—							
Suburban passenger	113,717	n.a.	12,649	n.a.	n.a.	..	n.a.
Country passenger	54,414	n.a.	10,298	..	5,132	17,342	n.a.
Other	20,216	n.a.	4,908	n.a.	3,090	—	n.a.
Total coaching	*188,347*	*98,630*	*27,855*	*n.a.*	*8,222*	*17,342*	*340,396*
Freight (goods and livestock)—							
Grain	n.a.	45,500	24,303	..	46,053	7,670	n.a.
Other agricultural produce	n.a.	4,231	18,015	..	4,682	892	n.a.
Coal, coke and briquettes	n.a.	4,106	274,040	..	12,566	9,823	n.a.
Other minerals(*c*)	n.a.	4,590	43,206	..	41,507	12,410	n.a.
Iron and steel	n.a.	7,001	8,481	..	177	14,247	n.a.
Fertilisers	n.a.	5,884	4,188	..	7,243	3,757	n.a.
Cement	n.a.	5,726	3,384	..	1,765	2,875	n.a.
Timber	n.a.	2,810	2,290	..	6,786	6,524	n.a.
Containers	n.a.	9,569	11,595	..	(*d*)	25,633	n.a.
Livestock	n.a.	873	19,555	..	210	6,110	n.a.
All other commodities	n.a.	47,386	72,138	..	54,066	75,272	n.a.
Total freight	*431,157*	*137,676*	*481,193*	..	*175,054*	*165,214*	*1,390,294*
Miscellaneous	43,712	23,744	11,217	n.a.	28,108	12,711	119,492
Grand total	**663,216**	**260,049**	**520,265**	**37,714**	**211,385**	**195,267**	(*e*)**1,887,896**

(*a*) Excludes Government grants. (*b*) See page 458. (*c*) Includes sand and gravel. (*d*) Separate details for containers are not available. Freight carried in containers is included in commodity classifications. (*e*) Includes South Australia.

GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS, SYSTEMS
($'000)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Australian National*	*Aust.*
				GROSS EARNINGS				
1976–77	351,875	163,512	262,561	54,284	137,323	8,780	62,590	1,040,925
1977–78	380,724	176,522	273,551	(*a*)6,113	149,477	(*a*)	(*a*)122,040	1,108,427
1978–79	379,033	192,656	310,418	24,550	154,597	..	131,829	1,193,083
1979–80	495,833	230,549	352,700	26,943	174,258	..	157,971	1,438,254
1980–81	559,645	256,177	416,796	33,655	180,529	..	181,353	1,628,155
1981–82	663,216	260,049	520,265	37,714	211,385	..	195,267	1,887,896
				WORKING EXPENSES				
				(*b*)	(*b*)			
1976–77	570,272	301,232	299,044	103,629	132,024	23,340	52,628	1,482,169
1977–78	643,623	332,508	337,002	(*a*)25,723	148,708	(*a*)	(*a*)195,796	1,683,360
1978–79	679,999	347,802	365,070	71,043	159,737	..	204,738	1,828,389
1979–80	757,555	392,586	422,503	74,391	180,280	..	222,799	2,050,114
1980–81	870,378	447,761	486,126	84,998	193,166	..	244,043	2,326,472
1981–82	1,063,725	509,196	588,051	100,000	217,961	..	268,001	2,746,934
				NET EARNINGS(*c*)				
1976–77	−218,397	−137,720	−36,483	−49,345	5,299	−14,560	9,962	−441,244
1977–78	−262,899	−155,986	−63,451	(*a*)−19,610	769	(*a*)	(*a*)−73,756	−574,933
1978–79	−300,966	−155,147	−54,652	−46,493	−5,141	..	−72,909	−635,308
1979–80	−261,722	−162,037	−69,803	−47,448	−6,022	..	−64,828	−611,860
1980–81	−310,734	−191,585	−69,331	−51,343	−12,637	..	−62,690	−698,320
1981–82	−400,509	−249,147	−67,786	−62,286	−6,576	..	−72,734	−859,038

(*a*) See page 458. (*b*) Includes provision of reserves for depreciation. (*c*) Excess of gross earnings over working expenses as shown in this table.

GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1981–82
($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Australian National*	*Aust.*
Maintenance of way and works	171,851	(*b*)	151,701	n.a.	(*c*)47,417	n.a.	n.a.
Motive power(*a*)	385,118	(*b*)	241,939	n.a.	(*c*)56,523	n.a.	n.a.
Traffic	247,710	421,079	145,295	n.a.	81,821	n.a.	n.a.
Other charges	259,046	75,209	49,115	n.a.	32,200	n.a.	n.a.
Total	**1,063,725**	**496,287**	**588,051**	**(*c*) 100,000**	**(*d*)217,961**	**268,001**	**2,734,025**

(*a*) Includes maintenance of rolling stock. (*b*) Not available separately; included with traffic. (*c*) See page 458. (*d*) Includes provision of reserves for depreciation.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1982
($'000)

	Net earnings —excess of gross earnings over working expenses	**Plus** *grants and other earnings* payable to railways				**Less** *other expenses charged to railways*					
System		*State Govern-ment grants*	*Road motor earnings*	*Other*	*Total*	*Interest and ex-change*	*Sinking fund*	*Road motor expenses (a)*	*Other*	*Total*	*Surplus or deficit (−)*
New South Wales	−400,509	(*b*)13,100	..	75,727	88,827	35,414	16,116	..	24,197	75,727	−387,409
Victoria	−249,147	-	148	–	148	..	..	571	..	571	−249,570
Queensland	−67,786	-	–	..	–	88,789	–	–	(*c*)500	89,289	−157,075
South Australia(*d*)	−62,286	55,350	-	–	55,350	–	–	–	2,171	2,171	−9,107
Western Australia	−6,576	–	2,181	1	2,182	27,335	–	3,533	–	30,868	−35,262
Australian National	−72,734	68,200	–	–	68,200	–	–	–	2,990	2,990	−7,524
Australia	**−859,038**	**136,650**	**2,329**	**75,728**	**214,707**	**151,538**	**16,116**	**4,104**	**29,858**	**201,616**	**−845,947**

(*a*) Includes interest and exchange. (*b*) Grants to meet losses on country developmental lines, and the employer liability to the Government Railways Superannuation Account. (*c*) Demolished assets written off. (*d*) See page 458.

Employment, salaries and wages

GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID(*a*), 1981–82

	N.S.W.	*Vic.(b)*	*Qld*	*S.A. (c)(d)*	*W.A.*	*Australian National (e)*	*Aust.*
Salaried staff	9,485	5,276	4,134	603	2,027	2,036	23,561
Wages staff	32,122	15,835	21,109	2,940	7,128	8,056	87,190
Total staff	**41,607**	**21,111**	**25,243**	**3,543**	**9,155**	**10,092**	**110,751**
Salaries and wages paid $'000	791,752	351,724	434,422	41,487	137,289	183,162	1,939,835

(*a*) Excludes salaries and wages paid to road motor staff. (*b*) Includes construction staff. (*c*) See page 458. (*d*) Includes staff made available to the State Transport Authority by the ANRC. (*e*) Excludes staff made available to the South Australian STA.

Non-government railways

The Australian non-government railways covered in this section are those which operate outside industrial estates, harbour precincts, mines and quarries with a route distance exceeding two kilometres.

The figures in the following table have been compiled from information supplied to the Department of Transport or the Bureau of Transport Economics by the various railway operators. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Department of Transport or the Bureau of Transport Economics using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1976–77 TO 1981–82

Year	*Iron ore railways*	*Sugar tramways*	*Other non-government railways(a)*	*Total non-government railways(a)*
		TONNES CARRIED (million)		
1976–77	86.6	20.1	20.3	127.0
1977–78	85.9	20.3	17.9	124.0
1978–79	79.5	18.6	19.6	117.7
1979–80	88.3	18.3	20.6	127.2
1980–81	88.5	20.6	r19.5	r128.6
1981–82	83.0	21.6	20.9	125.6
		TONNE-KILOMETRES (million)		
1976–77	26,646	322	369	27,337
1977–78	27,723	325	324	28,372
1978–79	24,930	299	324	25,553
1979–80	27,128	292	345	27,765
1980–81	28,264	351	r319	r28,934
1981–82	26,668	367	347	27,384

(*a*) Includes transfers to and from Government railways.

TRAM, BUS, AND FERRY SERVICES

Systems in operation

Trams. At 30 June 1982 tram services were in operation in Melbourne, Victoria and in Adelaide, South Australia. Regular tram services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972. However services are operated in both cities, on an irregular basis, but generally at holiday periods, as a tourist attraction.

In many parts of Australia private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tram used for the conveyance of passengers.

Buses. Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian Government Railways, and the Australian National Railways. Particulars of bus services under the control of private operators for the States of New South Wales, Victoria, Queensland and South Australia are given in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0) for years prior to 1976–77.

Ferries. Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book.

Government and municipal tram and bus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities and the gradual replacement of tram services by bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES: 1981–82

		N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Route-kilometres at 30 June										
Tram(*a*)	kilometres	..	220	..	11	..	..	..	..	231
Bus	"	1,104	302	751	951	8,379	493	152	1,313	13,445
Vehicle-kilometres										
Tram	'000	..	24,030	..	806	..	..	..	..	24,836
Bus	"	66,700	13,336	21,306	38,067	45,645	9,691	1,670	12,689	209,104
Rolling stock at 30 June										
Tram	number	..	698	..	26	..	..	..	..	724
Bus	"	1,723	267	579	751	960	303	39	351	4,973
Passenger journeys										
Tram	'000	..	103,479	..	(*b*)	..	..	..	..	(*e*)103,479
Bus	"	187,340	23,546	43,753	(*b*)	54,878	14,283	1,816	17,600	(*e*)343,216
Gross revenue(*c*)										
Tram and bus	$'000	83,636	55,595	23,426	(*b*)	24,487	5,625	530	8,653	(*e*)201,952
Working expenses(*d*)										
Tram and bus	$'000	160,046	111,711	35,220	(*b*)	51,884	14,524	2,835	21,174	(*e*)397,394
Net revenue										
Tram and bus	$'000	−76,410	−56,116	−11,794	(*b*)	−27,396	−8,899	−2,305	−12,521	(*e*)−195,441
Employees at 30 June										
Tram and bus	number	6,164	4,592	1,518	(*b*)	2,240	584	97	n.a.	(*e*)15,195

(*a*) Gauge 1435 mm throughout. (*b*) Not separately available. See page 458. (*c*) Excludes government grants. (*d*) Includes provision of reserves for depreciation, etc., where possible. (*e*) Excludes details of metropolitan tram and bus services operated by the South Australian State Transport Authority. See page 458. Minus sign (−) denotes deficit.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Route-kilometres at 30 June							
Tram	kilometres	228	228	231	231	231	231
Bus	"	12,142	12,649	12,828	14,173	11,930	13,445
Vehicle kilometres							
Tram	'000	24,940	24,955	24,967	24,330	24,864	24,836
Bus	"	192,003	197,660	201,693	203,963	193,324	209,104
Rolling stock at 30 June							
Tram	number	765	774	756	759	767	724
Bus	"	4,897	5,050	5,070	5,112	4,941	4,973
Passenger journeys							
Tram	'000	104,188	102,581	(*a*)101,070	(*a*) 98,889	(*a*) 100,474	(*a*) 103,479
Bus	"	404,228	413,987	(*a*)357,558	(*a*) 356,638	(*a*) 347,133	(*a*) 343,216
Gross revenue(*b*)							
Tram and bus	$'000	123,740	134,457	(*a*)123,741	(*a*) 143,324	(*a*) 184,596	(*a*) 201,952
Working expenses(*c*)							
Tram and bus	$'000	239,107	267,281	(*a*)258,644	(*a*) 277,865	(*a*) 337,434	(*a*) 397,394
Net revenue							
Tram and bus	$'000	−115,366	−132,824	(*a*)−134,902	(*a*)−134,542	(*a*)−152,838	(*a*) −195,441
Employees at 30 June							
Tram and bus	number	18,276	(*a*)16,613	(*a*)16,547	(*a*) 16,244	(*a*) 13,795	(*a*) 15,195
Accidents							
Tram and bus(*d*)							
Persons killed	number	25	22	(*e*)27	(*a*) 12	n.a.	n.a.
Persons injured	"	(*e*)1,609	(*e*)1,727	(*a*)1,885	(*a*) 1,917	n.a.	n.a.

(*a*) Excludes details of metropolitan tram and bus services in South Australia. See page 458. (*b*) Excludes government grants. (*c*) Includes provision of reserve for depreciation, etc., where possible. (*d*) Excludes accidents to employees. (*e*) Excludes New South Wales.

MOTOR VEHICLES

Arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority or authorities in each State and Territory.

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Australian Government (excluding those belonging to the defence services).

Survey of motor vehicle usage

A survey was conducted throughout Australia in late 1982 by the Australian Bureau of Statistics for the purpose of gathering information on the usage of motor vehicles. The owners of approximately 59,000 vehicles other than commercial buses and Australian Government owned vehicles were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1982. The framework from which the sample was drawn was obtained from the motor vehicle registration authorities in all States and Territories. The survey was based on respondents' recollection of their usage of the selected vehicles over their period of ownership during the survey year.

The main purpose of the survey was to determine the total distance travelled by vehicles, classified according to area and purpose of travel. Information was also obtained from the survey on: (i) tonne-kilometres; (ii) average load carried; (iii) vehicle usage (i.e. for hire and reward, ancillary or other); (iv) main type of operation; (v) fuel consumption; (vi) occupant-kilometres; and (vii) driver characteristics.

The following table shows, for Australia, total annual kilometres travelled for the twelve months ended 30 September 1982 classified by vehicle type and purpose of travel. The percentage standard errors (S.E.%) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. For example, if an estimate of 3,000 million kilometres has a standard error of 5 per cent (i.e. 150 million kilometres), then there would be approximately two chances in three that a comparable complete collection would give a figure within the range of 2,850 million kilometres to 3,150 million kilometres and about nineteen chances in twenty that the figure would be within the range of 2,700 million kilometres to 3,300 million kilometres.

TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL, TWELVE MONTHS ENDED 30 SEPTEMBER 1982

	Laden business		*Unladen business*		*Total business (a)*		*To and from work paid and unpaid*		*Private*		*Total*	
Type of vehicle	*million kilo-metres*	*REL. S.E. (%)*	*million kilo-metres*	*REL. S.E. (%)*	*million kilo-metres*	*REL. S.E. (%)*	*million kilo-metres*	*REL. S.E. (%)*	*million kilo-metres*	*REL. S.E. (%)*	*million kilo-metres*	*REL. S.E. (%)*
Cars and station wagons	..	..	..	..	19,469.6	3.3	23,206.8	2.0	53,431.7	1.3	96,108.9	1.0
Motor cycles	..	..	..	..	143.9	9.3	871.0	5.3	1,137.2	5.0	2,152.1	3.8
Utilities and panel vans	6,228.8	7.4	2,672.0	9.2	9,501.7	6.1	3,109.3	8.1	4,338.1	6.3	16,951.2	3.6
Rigid trucks	5,291.5	6.7	2,364.8	5.3	7,656.5	5.8	377.4	6.5	383.3	16.1	8,417.2	5.4
Articulated trucks	2,142.7	1.4	827.4	1.6	2,970.1	1.2	24.4	8.8	5.0	12.7	2,999.5	1.2
Other truck type vehicles	..	..	..	..	229.8	12.1	5.0	28.8	2.3	48.5	237.1	11.8
Total	**13,663.0**	**4.1**	**5,864.3**	**4.6**	**39,971.5**	**2.4**	**27,593.9**	**1.9**	**59,297.6**	**1.3**	**126,866.0**	**0.9**

(*a*) Includes the total kilometres travelled for business purposes of cars, station wagons, motor cycles and utilities and panel vans predominantly used for private purposes. The dissection of business travel into laden/unladen was not sought for these vehicles.

Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicle census data from information made available by the various motor vehicle registration authorities in the States and Territories. Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979 and 1982. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1982 census have been published in separate census publications for each State and Territory and for Australia.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1982 (FINAL)
('000)

State or Territory	Motor cars and station wagons	Utilities	Panel vans	Trucks		Other truck type vehicles	Buses	Motor cycles	Total (a)
				Rigid	Articulated				
New South Wales	2,070.4	158.4	161.7	155.2	16.1	11.9	15.9	118.5	2,708.1
Victoria	1,700.7	118.5	55.2	146.9	11.5	11.4	11.4	71.7	2,127.2
Queensland	1,005.3	190.5	77.0	55.1	8.6	4.5	7.3	91.8	1,440.0
South Australia	580.4	43.5	28.0	41.5	4.4	5.7	3.6	36.8	744.0
Western Australia	561.3	59.0	53.8	59.6	4.3	6.0	4.9	34.6	783.4
Tasmania	188.1	21.2	11.9	12.8	1.4	1.7	2.1	5.1	244.3
Northern Territory	34.5	12.0	4.3	4.5	0.8	0.2	0.6	4.0	60.9
Australian Capital Territory	92.6	4.5	3.4	3.5	0.2	0.6	0.5	4.4	109.7
Australia	**6,233.4**	**607.6**	**395.3**	**479.0**	**47.2**	**42.0**	**46.2**	**366.9**	**8,217.7**

(*a*) Excludes tractors, plant and equipment, caravans and trailers.

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA
('000)

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses	Total (excludes motor cycles)	Motor cycles
1977	5,243.0	1,279.6	6,522.6	295.5
1978	5,462.2	1,359.9	6,822.1	292.4
1979	5,657.2	1,412.7	7,069.9	288.2
1980	5,800.6	1,462.4	7,262.9	310.3
1981	6,021.0	1,544.3	7,565.3	352.3
1982	6,293.8	1,661.5	7,955.3	390.8

MOTOR VEHICLES(*a*) ON REGISTER PER 1,000 OF POPULATION, STATES AND TERRITORIES

30 June	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1977	431.2	463.4	465.4	495.1	520.5	489.6	333.0	444.5	459.6
1978	443.0	482.2	484.6	502.1	543.5	510.3	383.6	431.2	475.1
1979	454.3	494.0	500.2	507.0	555.8	527.1	377.7	468.8	487.1
1980	467.9	487.0	518.8	515.8	563.8	530.7	372.3	455.2	494.2
1981	480.0	499.6	539.1	522.3	569.3	542.8	408.6	464.4	506.8
1982	499.8	525.1	554.3	532.9	563.2	560.3	420.4	464.0	524.1

(*a*) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly publications, and by type and make of vehicle in monthly and annual publications of Motor Vehicle Registrations.

In these statistics 'registrations' mean registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

Drivers' and riders' licences

At 30 June 1982, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 3,198,411; Victoria, 2,255,439; South Australia, 787,627; Western Australia, 756,816; Tasmania, 238,865; Northern Territory, 68,949; Australian Capital Territory, 139,057. Particulars are not available for Queensland.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

				Trucks					
State or Territory	*Motor cars and station wagons*	*Utilities*	*Panel vans*	*Rigid*	*Articu-lated*	*Other truck type vehicles*	*Buses*	*Total (excludes motor cycles)*	*Motor cycles*
1982 83									
New South Wales	149,021	10,433	28,016	8,276	761	621	1,527	198,655	21,829
Victoria	123,834	8,063	3,631	12,797	640	556	999	150,520	13,153
Queensland	79,171	14,585	9,060	3,167	435	219	1,028	107,665	12,347
South Australia	39,554	2,723	3,696	2,071	281	164	258	48,747	5,833
Western Australia	38,812	4,142	6,324	3,724	199	106	548	53,855	5,146
Tasmania	11,279	1,224	903	771	59	125	127	14,488	990
Northern Territory	3,260	2,058	459	160	39	23	52	6,051	925
Australian Capital Territory	8,592	454	275	548	12	20	141	10,042	838
Australia	**453,523**	**43,682**	**52,364**	**31,514**	**2,426**	**1,834**	**4,680**	**590,023**	**61,061**
1981 82	471,255	52,035	48,009	40,062	3,665	2,218	4,998	622,242	71,691
1980 81	462,487	47,474	37,391	36,485	4,269	1,939	4,170	594,215	70,799
1979 80	451,950	43,826	30,169	33,541	4,282	1,611	3,045	568,424	53,947
1978 79	463,453	41,591	32,068	33,756	4,496	1,891	3,171	580,426	37,278
1977 78	432,439	45,946	40,312	35,034	4,000	2,474	3,712	563,917	38,049

ROAD TRAFFIC ACCIDENTS

Accidents involving casualties, persons killed, persons injured

Since 1 January 1980 the ABS in the compilation of national statistics on road traffic accidents has adopted a new definition of injury and injury accidents. An injury is defined as injury to any person involved in a road vehicle accident resulting in the injured person being admitted to hospital. An injury accident is therefore defined as a non-fatal road vehicle accident in which at least one injured person was admitted to hospital. Statistics prior to this date on injury accidents and number of persons injured are therefore not comparable.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(*a*) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED

				Per 100,000 of mean population			Per 10,000 motor vehicles registered(*b*)		
State or Territory	*Number of accidents*	*Persons killed*	*Persons injured*	*Number of accidents*	*Persons killed*	*Persons injured*	*Number of accidents*	*Persons killed*	*Persons injured*
				1981					
New South Wales	9,858	1,291	11,417	189	25	218	37	5	43
Victoria	7,127	766	8,308	180	19	210	35	4	41
Queensland	4,191	594	4,709	179	25	201	31	4	35
South Australia	2,584	222	3,147	196	17	239	36	3	43
Western Australia	2,323	238	2,760	179	18	212	30	3	36
Tasmania	811	111	965	190	26	226	34	5	41
Northern Territory	424	70	527	345	57	430	79	13	98
Australian Capital Territory	261	29	275	115	13	121	24	3	25
Australia	**27,579**	**3,321**	**32,108**	**185**	**22**	**215**	**35**	**4**	**41**
				1982					
New South Wales	9,167	1,253	10,524	173	24	198	33	5	38
Victoria	7,035	709	8,283	176	18	207	32	3	38
Queensland	4,078	602	4,552	169	25	188	29	4	32
South Australia	2,569	270	3,081	193	20	232	34	4	41
Western Australia	2,401	236	2,825	179	18	211	31	3	36
Tasmania	645	96	757	151	22	176	26	4	31
Northern Territory	362	60	413	279	46	319	62	10	71
Australian Capital Territory	219	26	219	94	11	95	19	2	20
Australia	**26,476**	**3,252**	**30,654**	**175**	**21**	**202**	**31**	**4**	**37**

(*a*) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (*b*) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1981 and 1982.

ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	*N.S.W*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Accidents involving fatalities—									
1977	1,118	835	515	270	259	99	39	26	3,161
1978	1,222	775	532	254	304	96	58	27	3,268
1979	1,125	750	544	277	257	83	43	24	3,103
1980	1,152	608	508	240	268	96	55	27	2,954
1981	1,130	677	510	196	217	97	63	24	2,914
1982	1,115	631	522	239	203	84	52	26	2,872
Persons killed—									
1977	1,268	954	572	306	290	112	47	29	3,578
1978	1,384	869	612	291	345	106	68	30	3,705
1979	1,290	847	613	309	279	93	53	24	3,508
1980	1,303	657	557	269	293	100	63	30	3,272
1981	1,292	766	594	222	238	111	70	29	3,322
1982	1,253	709	602	270	236	96	60	26	3,252

ROADS

An article dealing with the development of roads in Australia is given in Year Book, No. 60, pages 385–93.

Summary of roads used for general traffic

Proclaimed or declared roads. The table following is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1982. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes (e.g. insufficiency of funds, man-power or materials), construction or maintenance may not keep pace with gazettal of roads, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1982

(Kilometres)

Class of road	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
State Highways and Freeways	10,495	7,350	10,348		7,739	1,956	
Trunk roads	7,098	14,585	149	13,381	7,482		108,734
Ordinary main roads	18,349		8,606			1,196	
Total main roads	*35,942*	*21,935*	*19,103*	*13,381*	*15,221*	*3,152*	*108,734*
Secondary roads	(*a*)299	–	13,020	–	8,740	285	22,344
Development roads	3,474	–	8,036	–	–	84	11,594
Tourist roads	444	797	–	–	–	176	1,417
Other roads	2,511	(*b*)1,030	–	–	–	–	3,541
Total other roads	*6,728*	*1,827*	*21,056*	–	*8,740*	*545*	*38,896*
Grand total	**42,670**	**23,762**	**40,159**	**13,381**	**23,960**	**3,697**	**147,629**

(*a*) Metropolitan only. (*b*) Forest roads.

Total roads. The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES, 30 JUNE 1982

(Kilometres)

Surface of roads	*N.S.W.(a)(b)*	*Vic.(c)*	*Qld*	*S.A.*	*W.A.(d)*	*Tas.*	*N.T.*	*A.C.T.(e)*	*Total (a)*
Bitumen or concrete .	70,277	63,926	48,996	20,777	37,081	8,014	5,460	1,865	n.a.
Gravel, crushed stone or other improved surface	66,616	47,905	34,575		34,168	13,684	4,064	327	n.a.
Formed only . . .	39,188	23,503	57,640	81,362	44,777	407	4,834	42	n.a.
Cleared only . . .	13,092	21,867	21,202		22,826	210	6,670	–	
Total . . .	**189,173**	**157,201**	**162,413**	**102,139**	**138,851**	**22,315**	**21,028**	**2,234**	**n.a.**

(*a*) Excludes 15,397 kilometres of road dedicated but not trafficable. (*b*) Figures as at 30 June 1978. (*c*) Excludes roads coming under the responsibility of the State Electricity Commission (64 km), Melbourne and Metropolitan Board of Works (39 km) and Forests Commission (39,367 km). (*d*) Excludes Forests Department roads. (*e*) Figures at 30 June 1980.

Expenditure on roads and bridges

Primary responsibility for the construction and maintenance of roads and bridges rests with State and local authorities. For detailed information *see* the individual State Year Books.

National Association of Australian State Road Authorities

The National Association of Australian State Road Authorities (NAASRA) was established in 1934. The present member authorities are: Department of Main Roads, New South Wales; Road Construction Authority, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Main Roads, Tasmania; Northern Territory Department of Transport and Works; Commonwealth Department of Housing and Construction.

The Association's objectives are to provide a central organisation where, by co-operative effort, a uniform approach to the improvement, planning and development of the Australian road system can be achieved. National standards for road and bridge construction and maintenance and improved administrative and financial control methods are developed by committees of experienced staff from the authorities, with secretarial services provided by a small staff located in Sydney.

This Secretariat arranges publication of the policies and standards which are widely used by road authorities, local government and universities; co-operates with the Standards Association of Australia on the preparation of national codes of practice; and acts as an Australian centre for contact with overseas road bodies and for the circulation of standards published by them.

The Association regularly confers with the Department of Housing and Construction, the Bureau of Transport Economics and the Australian Transport Advisory Council on major road policies. As part of the Commonwealth Government's external aid program, and in conjunction with the Department of Foreign Affairs, member authorities of the Association conduct engineering training courses for experienced engineers from African and Asian countries.

The Association is a member of the Permanent International Association of Road Congresses (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

Australian Road Research Board

The Australian Road Research Board (ARRB) is a non-profit-making company founded in 1960 by the National Association of Australian State Road Authorities (NAASRA), and now located at Vermont in Victoria. It is financed by Federal and State Government Road Authorities whose permanent heads make up ARRB's Board of Directors. The Executive Director, a full-time employee and member of the Board, is responsible for administering the Directors' policies.

The ARRB regularly undertakes and sponsors road and road transport research over a comprehensive range of subjects and disseminates results to appropriate organisations, engineers and scientists involved in the design, location, construction, upkeep and use of roads. In selecting and monitoring its research projects, and developing a longer term research plan, ARRB is assisted by a senior advisory Steering Committee and four Technical Committees in the areas of Road Technology, Road Users, Road Transport and Local Government, the members of which are experts drawn from government, commerce and education.

ARRB disseminates road research information through its major biennial conferences and regular symposia, seminars and workshops and through its publications which include the *ARRB Conference Proceedings*, a quarterly journal *Australian Road Research*, the *Source Book for Australian Roads*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes Australian road literature in the quarterly *Australian Road Index (ARI)*, and research projects in the annual *Australian Road Research in Progress (ARRIP)*. The machine-readable version of *ARI* and *ARRIP*, called Australian Road Research Documentation (ARRD), is available on AUSINET, the Australian Information Network.

ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects, IRRD information from all member countries is available to Australians through ARRB's computer search services. ARRB also maintains close contacts with road research organisations in other countries.

AIR TRANSPORT

Department of Aviation

International Organisations. Australia is one of the 150 (as at 30 June 1983) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also a member of the 15 man Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council and the Airport Operators Council International.

International agreements. Australia had air service agreements in force with twenty-eight countries at 30 June 1983. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements granting traffic rights with four other countries at 30 June 1983.

International air services. At 30 June 1983, twenty-three overseas international airlines were operating regular scheduled air services to Australia. These were: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Niugini (Papua-New Guinea), Air Pacific (Fiji), Air Vanuatu (Vanuatu), Alitalia (Italy), British Airways (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Hong Kong), Continental Airlines (United States of America), Deutsche Lufthansa (Federal Republic of Germany), Garuda Indonesian Airways (Indonesia), Japan Air Lines (Japan), Jugoslovenski Aerotransport (Yugoslavia), KLM Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Pan American World Airways (United States of America), Philippines Air Lines (Philippines), South African Airways (Republic of South Africa), Thai Airways International (Thailand), Malaysian Airways System (Malaysia), and Union de Transport Aeriens (France). Qantas, Australia's international airline, operates a fleet of 24 Boeing 747 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

International operations. The table following shows particulars of international airline traffic during 1982–1983 moving into and out of an area which embraces Australia and Norfolk Island. These figures do not include traffic between Australia and Norfolk Island.

AIR TRANSPORT: INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA(*a*), 1982–83p

Type of traffic	*Number of flights*	*Passengers*	*Freight tonnes*	*Mail tonnes*
Traffic to Australia—				
Qantas Airways Limited	4,420	933,405	35,580	1,003
Other airlines	6,374	1,224,262	52,013	5,942
All airlines	**10,794**	**2,157,667**	**87,593**	**6,945**
Traffic from Australia—				
Qantas Airways Limited	4,297	898,849	25,444	2,983
Other airlines	6,390	1,162,076	51,241	1,269
All airlines	**10,687**	**2,060,925**	**76,685**	**4,252**

(*a*) Australian mainland and Norfolk Island.

Statistics covering the operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with overseas countries.

AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Hours flown	number	79,499	75,643	70,065	74,879	73,679	77,910
Kilometres flown	'000	61,586	58,962	59,040	59,109	58,188	61,052
Passengers—							
Embarkations	number	1,551,679	1,569,374	1,782,673	1,933,580	1,883,477	2,020,107
Passenger-kilometres	'000	11,318,928	12,029,554	14,317,936	16,296,416	14,876,509	14,818,491
Freight—							
Tonnes uplifted	tonnes	34,380	40,972	51,373	52,326	53,753	66,036
Tonne-kilometres	'000	258,748	301,253	373,534	412,518	418,849	479,996
Mail—							
Tonnes uplifted	tonnes	3,205	2,981	3,238	3,878	3,919	4,344
Tonne-kilometres	'000	27,788	27,618	32,019	36,226	36,581	39,244

Regular air services within Australia

Trunk route services. In June 1981 the Parliament passed a package of legislation consisting of the *Airlines Agreement Act* 1981 and the *Airlines Equipment Amendment Act* 1981, as well as the *Australian National Airlines Repeal Act* 1981 and the *Independent Air Fares Committee Act* 1981.

The Airlines Agreement Act ratified the 1981 Airlines Agreement between the Commonwealth, Ansett Transport Industries and TAA, which provided for the continuation of the two airline policy in respect of scheduled trunk route passenger services as well as repealing earlier Airlines Agreements. Successive Airlines Agreements have provided the basis for the two airline policy, under which scheduled passenger services on trunk routes are provided by the privately owned Ansett (a division of Ansett Transport Industries (Operations) Pty Ltd, a subsidiary of Ansett Transport Industries Ltd) and the Commonwealth owned Australian National Airlines Commission, trading as Trans-Australia Airlines (TAA). The 1981 Airlines Agreement more clearly defined the role for regional and commuter operators, excluded freight from the ambit of the two airline policy and formally defined the roles of QANTAS, TAA and ANSETT for the provision of international and domestic services respectively.

The Airlines Equipment Amendment Act provided for the import, by specialist freight operators and regional airlines, of large turbo jet aircraft (the Commonwealth's power to control imports is the basic means of upholding the two airline policy). The Australian National Airlines Repeal Act (not subsequently proclaimed) provided for the restructuring of TAA as a public company, and the Independent Air Fares Committee Act provided for the establishment of a Committee with authority over fares for domestic regular public transport passenger services.

At 30 June 1983, the Ansett fleet included 2 Boeing 767s, 16 Boeing 727s, 12 Boeing 737s, 3 Electra freighters, 6 Fokker F27 Friendships and 2 helicopters. At the same date, Trans-Australia Airlines operated a fleet of 12 Boeing 727s, 4 Airbus A300s, 9 McDonnell-Douglas DC 9s and 3 Fokker F27 Friendships.

Regional services. In addition to their competitive trunk route services, both Ansett and Trans-Australia Airlines operate limited domestic regional services, which are non-competitive. There are also a number of smaller regional airlines operating from Sydney (Air New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (Airlines of Western Australia), Cairns (Air Queensland), and Darwin (Airlines of Northern Australia). Regional airlines are so-called because, in general, they serve specific geographic regions. Except for the independently-owned East-West Airlines and Air Queensland, all regional airlines are divisions of Ansett Transport Industries (Operations) Pty Ltd. The larger aircraft used by these regional airlines are Fokker F28 Fellowships and F27 Friendships.

Freight services. In addition to freight services provided by the passenger airlines, IPEC Aviation provides all-freight airline services with Argosy and cargo charter services with a DC 9 aircraft over a limited network including services across Bass Strait. Also Bloodstock Air Services provides cargo charter services throughout Australia using B727 freighter aircraft, specialising in the carriage of livestock.

Commuter services. These are regular public transport services with light aircraft operating to fixed timetables, usually under the authority of a supplementary airline licence. They primarily provide airlinks between towns and country areas over routes which are not served by the major airlines, but many services also feed into capital cities. At 30 June 1983, there were 56 operators of commuter services in Australia, serving some 275 centres. Details of the operations of these commuter services are excluded from the statistics shown in this section.

Scheduled domestic airline services. Statistics of all regular airline services are set out in the following table.

AIR TRANSPORT: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA(*a*)

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Hours flown	number	258,151	279,385	280,233	284,381	277,199	268,339
Kilometres flown	'000	122,933	134,702	135,409	138,185	137,264	136,769
Passengers—							
Embarkations	number	9,348,697	10,289,477	10,720,181	11,504,957	11,380,798	11,396,510
Passenger-kilometres	'000	7,329,665	8,180,918	8,618,671	9,485,635	9,747,272	10,155,379
Freight—							
Tonnes uplifted	tonnes	108,108	120,887	127,528	129,775	124,955	136,250
Tonne-kilometres	'000	96,315	106,460	110,746	109,603	107,851	117,936
Mail—							
Tonnes uplifted	tonnes	9,636	11,307	13,126	15,053	17,302	16,841
Tonne-kilometres	'000	9,148	10,718	12,518	14,206	16,397	16,515

(*a*) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within Australia. The domestic carrier, East-West Airlines, commenced services between Sydney and Norfolk Island in March 1977 and particulars of these flights are included from that time. Prior to March 1977, Australia-Norfolk Island flights were operated by Qantas and details of those flights were included with statistics of regular overseas services.

Internal airline passenger embarkation and disembarkation. The statistics set out in the next table have been compiled by aggregating all internal airline passenger traffic loaded and unloaded at each

INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS

Airport	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Sydney	4,839,215	5,274,577	5,539,561	5,961,807	5,858,143	5,917,874
Melbourne	4,149,390	4,552,462	4,743,757	5,104,448	5,046,031	5,038,634
Brisbane	2,075,381	2,252,888	2,282,641	2,521,119	2,636,552	2,758,922
Adelaide	1,615,684	1,729,030	1,801,084	1,931,395	1,930,219	1,852,906
Perth	704,041	792,768	830,273	910,637	929,949	1,017,173
Canberra	881,668	966,388	945,260	967,803	872,223	820,943
Coolangatta	320,425	409,151	457,789	570,137	632,791	648,384
Hobart	403,069	437,948	455,577	473,567	474,115	475,127
Cairns	270,147	307,525	345,344	387,095	426,064	442,524
Townsville	322,498	353,522	363,285	378,884	384,587	396,622
Launceston	309,341	353,596	387,456	390,215	380,512	376,536
Darwin	199,963	225,052	249,056	278,669	290,789	287,210
Mackay	244,025	254,954	253,229	261,982	197,892	159,718

airport. They include passengers on flights between Australia and Norfolk Island. At ports where through-passengers transfer between flights, such passengers are counted as embarking as well as disembarking passengers.

General aviation activity, which covers all flying other than scheduled airline operations has grown rapidly throughout Australia in recent years and is an important sector of the Australian aviation industry. Hours flown by general aviation during 1981–82 were estimated at 1.77 million, approximately 1.5 per cent more than the previous year.

Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1983 was 443. Seventy were owned by the Commonwealth Government and 373 by local authorities and private interests. The number of licensed helipads throughout Australia and its territories is 7. Capital expenditure on aerodrome and building construction was $111.576 million in 1982-83. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1982-83 was $10.338 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled $29.893 million.

Airway facilities

A total of 463 navigational aids were in service at 30 June 1983. The total includes 252 non-directional beacons (NDB) (includes 222 standard NDB's and 30 locators), 108 distance measuring equipment (DME), 11 international distance measuring equipment (DMEI), 74 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS) and one twin locator approach system.

One hundred and seventy-four aerodromes are now equipped with night landing facilities. One hundred and fifteen Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range surveillance radars, two short range and seven secondary surveillance radars are also in operation. There are twenty-six fully-equipped Air Traffic Control Centres and thirty-nine flight service units in operation.

Air transport registrations, licences, etc., in force in Australia

At 30 June 1983 there were 6,773 aircraft registered in Australia. At the same time there were also 58,134 aeroplane pilots' licences in force, of which 26,295 were private pilots' licences, 5,426 commercial pilots' licences, 1,817 senior commercial pilots' licences, 2,461 air transport pilots' licences, and 22,135 student pilots' licences. In addition there were 1,486 helicopter pilots' licences in force of which 113 were private pilots' licences, 643 commercial pilots' licences, 97 senior commercial pilots' licences and 633 student pilots' licences. There were also 788 flight engineer licences, and 10 flight navigator licences in force.

Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(*a*), AUSTRALIA(*b*)

	1977	*1978*	*1979*	*1980*	*1981*	*1982*
Number	36	48	37	48	39	51
Persons killed	45	58	35	61	53	53
Persons seriously injured	24	35	29	33	33	35

(*a*) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft. (*b*) Excludes accidents outside Australia involving aircraft on the Australian register; includes all accidents to overseas registered aircraft that occur in Australia.

POSTAL, TELECOMMUNICATION AND RADIOCOMMUNICATION SERVICES

In this section, particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

Department of Communications

The Postal and Telecommunications Department was created on 22 December 1975. It replaced the Postmaster-General's Department, assuming those PMG functions remaining after the formation of the Postal and Telecommunications Commissions on 1 July 1975. Following the Federal election in November 1980, the name of the Department was changed to the Department of Communications. A major activity of the Department is the administration of the *Wireless Telegraphy Act* 1905 which concerns the regulation and management of the radio frequency spectrum for radiocommunications within the Commonwealth and its Territories.

The Department also undertakes, planning for the development of broadcasting and television services in Australia and the determination of standards and practices for technical equipment used in broadcasting and television services for which formal responsibility attaches to the Minister for Communications pursuant to the provisions of the *Broadcasting and Television Act*. The Department is closely involved in the planning and procurement of the National Communications Satellite System (NCSS), in association with other government departments and agencies in particular AUSSAT PTY LTD, a government-owned company formed to own and operate NCSS.

Another function of the Department is to provide policy advice to the Minister on postal, telegraphic, telephonic, broadcasting and other like services which are subject to legislation for which the Minister for Communications is responsible.

Authorities responsible to the Minister for Communications have been established to provide within Australia a network of facilities which enable people and organisations:

- to send letters, printed matter, parcels and money in Australia and overseas and to receive such items within Australia from overseas;
- to converse by telephone in Australia and overseas;
- to send and receive written messages, data pictures and other visual matter by electrical means within Australia and to and from overseas;
- to relay on the telecommunications network, radio and television broadcasts emanating within Australia and those on relay to and from overseas.

Australian Postal Commission

The Australian Postal Commission was established under the *Postal Services Act* 1975. It commenced operations on 1 July 1975 and trades under the name Australia Post.

The establishment of the Australian Postal Commission was accompanied by a complete reorganisation of the management of postal services in Australia. The Commission was given a charter to improve postal services whilst avoiding the large financial losses of previous years. The Postal Services Act sets specific financial objectives for the Commission, which are designed to enable postal services to be operated on a business-oriented basis.

In accordance with the *Postal Services Act* 1975, the Australian Postal Commission is required to pursue, as far as practicable, a financial policy to secure revenue sufficient to meet all expenditure chargeable to revenue and provide at least half of its capital expenditure.

Since 1 July 1975, Australia Post has taken a number of initiatives to develop new services and maintain existing ones while at the same time maintaining competitive pricing. The initiatives include:

- the introduction on 1 July 1981 of Australia Post Express, a fast service for urgent postal articles;
- the introduction of reduced rate and discount mail services for bulk lodgment of mail;
- the introduction of a concessional rate for domestic greeting cards in November and December;
- the introduction of a new Postal Money Order Service;
- the revision of the Registered Publications Service;
- the introduction of an overnight parcel service between all capital cities;
- a new policy for rural and remote mail deliveries which provides for a minimum of twice-weekly delivery wherever practicable;
- the extension of the high-speed International Priority Paid service network;
- the extension of the Surface Air Lifted network; and

- the introduction of the Bulk Direct Mail Service for approved addressed advertising mail.

The Commission has undertaken a program to decentralise the mail network as a means of improving efficiency and, more particularly, the reliability of the mail service. In the decentralised mail networks, regional mail centres in metropolitan and country areas have replaced the former highly centralised network which relied heavily on a single facility in the capital cities. The new arrangements are complete in Victoria and Queensland and almost complete in New South Wales. The following tables indicate Australia Post's financial results, services and operations for 1982–83. Selected tables also show figures for earlier periods.

AUSTRALIAN POSTAL COMMISSION: REVENUE AND EXPENDITURE, 1978 TO 1983
($'000)

Year ended 30 June—	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*
Revenue—						
Mail services	456,739	528,978	582,200	668,676	767,843	870,719
Money order, postal order services	6,242	5,434	6,350	7,758	10,059	10,544
Commission on agency services	95,636	93,171	82,189	83,471	86,935	90,113
Other revenue	20,110	18,907	19,442	22,147	22,591	(*b*)28,058
Total	**578,727**	**646,490**	**690,181**	**782,052**	**887,428**	(*b*)**999,434**
Expenditure—						
Operating and general	426,100	476,915	530,875	625,005	696,026	771,889
Transportation	55,343	44,842	52,744	61,018	69,985	83,665
Depreciation, superannuation, long-service leave, interest	95,217	102,144	94,876	108,772	140,639	135,086
Total	**576,660**	**623,901**	**678,495**	**794,795**	(*a*)**906,650**	**990,640**

(*a*) Includes an abnormal adjustment to implement new depreciating accounting arrangements. (*b*) Includes net surplus from the disposal of Commission properties during the year. See table below.

AUSTRALIAN POSTAL COMMISSION: STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 30 JUNE 1983
($'000)

Revenue—	
Mail services	870,719
Postal money order services	10,544
Commission on agency services	90,113
Other revenue	19,583
Total	*990,959*
Expenditure—	
Operating and general	771,889
Transportation	83,665
Depreciation	10,842
Superannuation	90,200
Long service leave	29,830
Interest	4,214
Total	*990,640*
Operating surplus (deficit) before abnormal item	319
Abnormal item—	
Net surplus on disposal of Commission properties	(8,475)
Operating surplus after abnormal item	(8,794)
Appropriations—	
Accumulated deficit brought forward	(20,279)
Operating surplus for the year	(8,794)
Accumulated deficit	(11,485)
Appropriation—	
For capital financing	(—)
Accumulated deficit carried forward	**(11,485)**

AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS AFFECTING FIXED ASSETS, 1982–83

($'000)

Class of assets	*Balance at 1 July 1982*	*Additions in the year*	*Asset expenditure written out*	*Balance at 30 June 1983 (a)*
Land	38,582	545	212	38,915
Buildings	224,829	36,898	1,391	260,336
Motor vehicles	19,294	4,562	3,340	20,516
Plant and Equipment	33,487	10,621	708	43,400
Total of fixed assets	*316,192*	*52,626*	*5,651*	*363,167*
Less accumulated depreciation	63,234			70,289
Net book value of fixed assets	**252,958**			**292,878**

(*a*) At cost.

AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS AFFECTING ACCUMULATED DEPRECIATION, 1982–83

($'000)

Class of asset	*Balance at 1 July 1982*	*Depreciation provided for in 1982–83*	*Accumulated depreciation written out*	*Balance at 30 June 1983*
Buildings	42,551	4,811	854	46,508
Motor vehicles	8,050	3,373	2,315	9,108
Plant and Equipment	12,633	2,658	618	14,673
Accumulated depreciation	**63,234**	**10,842**	**3,787**	**70,289**

AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1982 AND 1983

	H.Q.	*N.S.W. (Incl. A.C.T.)*	*Vic.*	*Qld*	*S.A. (Incl. N.T.)*	*W.A.*	*Tas.*	*Aust. 1983*	*Aust. 1982*
Official staff (*a*)—									
Full-time Permanent	616	11,199	7,849	4,041	2,638	2,273	674	29,290	28,312
Full-time Temporary	13	1,861	944	247	57	131	40	3,293	4,147
Part-time	1	1,139	507	313	302	275	89	2,626	2,683
Other staff (*b*)	—	3,136	1,841	1,579	855	701	376	8,488	8,449
Total	**630**	**17,335**	**11,141**	**6,180**	**3,852**	**3,380**	**1,179**	**43,697**	**43,591**

(*a*) 'Official Staff' are those whose employment is governed by the *Postal Services Act* 1975. (*b*) Includes persons who are not employed under the Postal Services Act, but who are employed on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Commission.

AUSTRALIAN POSTAL COMMISSION: MAIL DELIVERY NETWORK AND POST OFFICES AT 30 JUNE 1982 AND 1983

	N.S.W	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust. 1983*	*Aust. 1982*
Contract road services	1,401	768	1,077	262	400	189	4,097	4,328
Households receiving mail	1,950,666	1,360,391	826,529	507,516	468,263	142,309	5,255,674	5,056,932
Businesses receiving mail	181,145	125,155	76,136	45,451	44,987	12,694	485,568	455,011
Post Offices—								
Official—								
At 1 July 1982	507	332	217	157	158	41	1,412	1,422
At 30 June 1983	504	331	210	151	158	41	1,395	1,412
Non-official—								
At 1 July 1982	1,098	891	544	463	304	194	3,494	3,635
At 30 June 1983	1,086	882	544	446	295	195	3,448	3,494
Total post offices	*1,590*	*1,213*	*754*	*597*	*453*	*236*	*4,843*	*4,906*

AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED
('000)

Year ended 30 June	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total postal articles handled*	*Mail carried on domestic air services (included in total handled)*	
					Articles	*Gross weight*
						kilograms
1978	2,072,239	81,907	149,393	2,303,539	516,330	6,706
1979	(*a*)2,267,596	(*a*)87,757	149,278	(*a*)2,504,631	661,352	8,591
1980	2,379,953	94,826	156,573	2,631,352	769,391	9,994
1981	2,503,450	107,798	155,642	2,766,890	949,995	12,340
1982	2,606,124	105,154	165,276	2,876,554	1,083,876	14,080
1983	2,669,363	111,050	163,575	2,943,988	1,118,075	14,529

(*a*) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(*a*)
('000)

Year ended 30 June	*Standard articles*				*Non-standard articles*			
	Posted for delivery within Australia	*Posted for places abroad*	*Received from abroad*	*Total articles*	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*
1981	2,124,622	90,569	110,463	2,325,654	349,352	14,440	40,897	404,689
1982	2,221,294	87,501	121,929	2,430,724	353,669	14,920	38,188	406,777
1983	2,292,193	93,262	121,110	2,506,565	345,287	15,278	37,856	398,421
STATES—YEAR ENDED 30 JUNE 1983								
New South Wales	932,712	31,897	57,636	1,022,245	139,115	7,670	14,813	161,598
Victoria	602,530	31,393	43,741	677,664	113,610	4,181	14,208	131,999
Queensland	329,028	12,034	6,493	347,555	41,283	1,279	5,690	48,252
South Australia	191,358	8,301	5,171	204,830	23,471	843	956	25,270
Western Australia	187,304	9,295	8,069	204,668	21,855	1,272	2,189	25,316
Tasmania	49,261	342	..	49,603	5,953	33	..	5,986

(*a*) Includes Certified, Messenger Delivery and Priority Paid Mail.

AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(*a*) AND PARCELS
('000)

Year ended 30 June	*Registered articles*				*Parcels*			
	Posted for delivery in Australia	*Posted for places abroad*	*Received from abroad*	*Total articles*	*Posted for delivery in Australia*	*Posted for places abroad*	*Received from abroad*	*Total articles*
1978	3,122	1,422	2,794	7,338	18,234	1,068	1,998	21,300
1979	(*b*)3,092	1,371	2,790	(*b*)7,253	(*b*)19,838	1,088	2,018	(*b*)22,944
1980	3,107	1,451	2,758	7,316	22,951	1,192	1,875	26,018
1981	3,204	1,470	2,330	7,004	26,272	1,319	1,952	29,543
1982	2,938	1,458	2,854	7,250	28,223	1,275	2,305	31,803
1983	2,956	1,296	2,696	6,948	28,927	1,214	1,913	32,054
STATES—YEAR ENDED 30 JUNE 1983								
New South Wales	996	673	1,725	3,394	11,057	498	941	12,496
Victoria	770	409	801	1,980	8,420	405	529	9,354
Queensland	526	68	43	637	4,592	108	167	4,867
South Australia	294	64	19	377	2,157	87	82	2,326
Western Australia	255	81	108	444	2,195	109	159	2,463
Tasmania	115	1	..	116	506	7	35	548

(*a*) Totals include Certified, Messenger Delivery and Priority Paid Mail. (*b*) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES: ARTICLES HANDLED
('000)

Year ended 30 June	*Certified mail*	*Messenger delivery*	*Priority paid mail*
1978	5,473	1,013	1,783
1979	5,056	1,048	2,020
1980	5,780	1,169	2,350
1981	5,889	1,370	2,669
1982	5,897	1,434	2,793
1983	6,178	1,459	2,711
STATES—YEAR ENDED 30 JUNE 1983			
New South Wales	2,078	1,118	1,344
Victoria	1,751	195	674
Queensland	972	46	254
South Australia	593	51	230
Western Australia	565	44	135
Tasmania	219	5	74

Telecommunications services within Australia

The Australian Telecommunications Commission commenced operations on 1 July 1975, taking over the telecommunications functions of the former Postmaster-General's Department.

The functions of the Commission as set out in the *Telecommunications Act* 1975 are:

- to plan, establish, maintain and operate telecommunications services within Australia;
- to operate such other services as the Commission is authorised by this Act to operate;
- to provide, at the request of the Australian Government, technical assistance outside Australia in relation to the planning, establishment, maintenance and operation of telecommunications services in countries outside Australia; and
- to do anything incidental or conducive to the performance of any of the preceding functions.

Financial results

The following tables show the earnings, expenses and funds situation for the latest available three years of the Commission's operations.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: REVENUE
($'000)

Year ended 30 June—	*1981*	*1982*	*1983*
Telephone rentals	674,102	833,201	1,001,212
Telephone calls	1,533,172	1,761,610	2,011,546
Telephone connections and rearrangements	119,556	142,727	157,750
Telegrams	33,005	30,165	28,998
Telex rentals	29,830	40,020	56,748
Telex calls	29,345	32,488	34,556
Other earnings(*a*)	190,430	244,166	345,038
Total	**2,609,440**	**3,084,377**	**3,635,848**

(*a*) Major items within this classification are: fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: EXPENDITURE
($'000)

Year ended 30 June—	*1981*	*1982*	*1983*
Maintenance of plant	644,515	790,826	974,283
Operating	482,387	556,407	613,950
General and administrative	191,762	238,097	261,554
Accommodation	116,484	128,527	155,369
Depreciation	533,680	577,216	711,853
Interest	408,125	518,187	656,172
Total	**2,376,953**	**2,809,260**	**3,373,181**

A brief history of the development of telecommunications in Australia is shown in Year Book No. 59, pages 378-82. Common internal telecommunication operations comprise telephone, telegram, telex and data services. The following tables give details of these services.

TELEPHONE SERVICES IN OPERATION AT 30 JUNE 1983

	N.S.W. (Incl. A.C.T.)	*Vic.*	*Qld*	*S.A. (Incl. N.T.)*	*W.A.*	*Tas.*	*Australia*
Ordinary exchange services							
Automatic	1,851,277	1,394,296	728,287	471,579	423,996	132,260	5,001,695
Manual	16,236	607	10,294	3,620	520		31,277
Total	*1,867,513*	*1,394,903*	*738,581*	*475,199*	*424,516*	*132,260*	*5,032,972*
Party line services							
Automatic	364	–	306	30	66		766
Manual	1,311	7	1,067	208	19		2,612
Total	*1,675*	*7*	*1,373*	*238*	*85*	—	*3,378*
Private branch exchange services							
Automatic	217,692	135,014	55,312	53,411	51,171	11,207	523,807
Manual	353		314	183	44		894
Total	*218,045*	*135,014*	*55,626*	*53,594*	*51,215*	*11,207*	*524,701*
Public telephones							
Automatic	10,952	6,508	5,239	3,004	2,962	1,112	29,777
Manual	430	6	254	72	77		839
Total	*11,382*	*6,514*	*5,493*	*3,076*	*3,039*	*1,112*	*30,616*
Total all services							
Business automatic	529,470	403,440	217,312	130,086	132,980	36,983	1,450,271
Business manual	8,067	152	5,628	1,976	457		16,280
Non-business automatic	1,550,815	1,132,378	571,832	397,938	345,215	107,596	4,105,774
Non-business manual	10,263	468	6,301	2,107	203		19,342
Total Services	**2,098,615**	**1,536,438**	**801,073**	**532,107**	**478,855**	**144,579**	**5,591,667**

TELEPHONE INSTRUMENTS IN SERVICE

At 30 June—	*N.S.W. (Incl. A.C.T.)*	*Vic.*	*Qld*	*S.A. (Incl. N.T.)*	*W.A.*	*Tas.*	*Australia*
1981	3,085,574	2,161,824	950,443	694,285	609,781	182,429	7,684,336
1982	3,232,912	2,200,273	1,047,193	730,349	652,825	191,531	8,055,083
1983	3,091,583	2,387,943	1,103,479	765,536	690,417	227,704	8,266,662
Number per 100 population at 30 June	55.3	59.2	44.5	52.0	50.6	52.6	53.8

LOCAL AND TRUNK LINE TELEPHONE CALLS

Year ended 30 June—	*1981*	*1982*	*1983*
Effective paid local calls	5,300,578,000	5,451,452,000	5,456,219,000
Local calls per service	1,078	1,044	1,021
Trunk line calls	680,961,000	785,466,000	837,288,000
Trunk lines calls per service	139	150	153
Total calls	**5,981,539,000**	**6,236,918,000**	**6,433,456,000**

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961-62. For the year ended at 30 June 1983, 95.6 per cent of trunk calls were made by STD.

Telegrams

Telegrams can be lodged at any post office or telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be dispatched from any subscriber's telephone or telex service. The number of telegrams of various types transmitted within Australia is set out below.

TELEGRAM TRAFFIC

Year ended 30 June—	*1981*	*1982*	*1983*
Ordinary	4,320,353	3,808,525	3,185,567
Urgent	141,887	133,758	98,523
Meteorological	333,685	315,753	313,074
Service	265,086	200,580	453,576
Total telegrams	**5,061,011**	**4,458,616**	**4,050,740**

Telex

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows.

TELEX NETWORK SERVICES AND INTERNAL CALLS

Year ended 30 June—	*Number of services*	*Internal calls during the year*
1981	33,975	43,057,000
1982	37,802	44,209,000
1983	39,388	45,492,000

Further detailed statistics are contained in the Australian Telecommunication Commission's Annual Reports.

Overseas telecommunications services

The Overseas Telecommunications Commission (Australia) (OTC), established by the Overseas Telecommunications Act 1946, is a Commonwealth Statutory Authority responsible for the establishment, maintenance, operation and development of all public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea. It has a specific responsibility, under section 38A, to make its services available at the lowest possible rates of charges. OTC is responsible to the Commonwealth Parliament through the Minister for Communications.

Telephone, telex, public message telegram, switched data and leased circuit services are provided to most countries and places throughout the world by means of submarine cables, communications satellites and, in a decreasing number of cases, short wave radio. Television relay is provided to and from countries with access to satellite communications facilities. Recently introduced services include INTERPLEX (a large scale, common-use, leased-message switching system), MIDAS (a multimode international data acquisition service), OVERSEASFAX (an international facsimile service for document transfer), INTERTEL (a comprehensive public message service for small businesses) and MINERVA (an international electronic messaging system).

International consultation

OTC participates in the Commonwealth Telecommunications Organisation (CTO), the International Telecommunication Union (ITU), the International Telecommunications Satellite Organisation (INTELSAT) which owns and operates the international telecommunications satellite system, and the International Maritime Satellite Organisation (INMARSAT), which operates an international satellite system for the provision of high-grade telecommunications, including distress and search and rescue communications, with ships at sea. OTC also participates in the regional organisations, the Asia-Pacific Telecommunity and the South Pacific Regional Telecommunications Meetings (SPECTEL).

Establishments

The Commission's Head Office is in Sydney and it has offices in Canberra, Melbourne and Brisbane. The Commission owns and operates International Gateway terminals at Paddington and Broadway in Sydney which interface with the national telecommunications network; cable stations at Cairns (Qld), Guam in the Mariana Islands and at Norfolk Island; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.) and Moree (N.S.W.); international radio stations at Doonside and Bringelly (N.S.W.) and at Gnangara (W.A.); and fourteen coast radio stations at points around the Australian coast and one at Norfolk Island for communicating with ships at sea.

Submarine cables

OTC is a part owner of the following submarine cables (the year in which they opened for service is in brackets): COMPAC, Sydney–Auckland–Suva–Hawaii–Vancouver (1963); SEACOM, Sydney–Madang–Guam–Hong Kong (1967); TRANSPAC II, Hawaii–Guam–Okinawa (Japan) (1975); HAW III, Hawaii–U.S. Mainland (1975); TASMAN, Sydney–Auckland (1976); A–PNG, Sydney–Port Moresby (1976); OLUHO, Okinawa (Japan)–Philippines–Hong Kong (1977); ASEAN P–S, Philippines–Singapore (1978); ASEAN I–S, Indonesia–Singapore (1980) and IOCOM, Penang–Madras (1981).

In November 1979 the Government gave approval for OTC to participate in a replacement Pacific cable system (ANZCAN) linking Australia and New Zealand with Norfolk Island, Fiji, Hawaii and Canada, with onward connections to Britain and Europe. OTC's investment in the system, which is now under construction and will be entering into service in 1984, will be approximately $200 million.

Satellites

OTC is the fourth largest shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans, and a major shareholder in INMARSAT (see above). INTELSAT satellites now carry more than 60 per cent of Australia's international telecommunications and, through OTC, provide capacity through which the remote area television service is provided by the ABC.

1982–83 Statistics

As at 31 March 1983, OTC staff totalled 2,486; revenue for the previous 12 months was $300 million and profit before tax was $42.1 million. Telephone service, which is available to 233 overseas destinations, provided about 71 per cent of revenue, telex about 15 per cent and telegraph about 3.6 per cent. International Subscriber Dialling (ISD), by which customers can dial their own overseas telephone calls, is now available to more than 152 destinations. Over 99 per cent of international telex calls from Australia are now automatically subscriber connected.

More detailed statistics are contained in the OTC Annual Report.

Facilities to match growth

The high growth in demand for the Commission's services requires that the capacity of its major transmission and switching plant be at least doubled every three years. The OTC is applying computer techniques extensively in a number of its services, including telephone, telex, MIDAS (multimode international data acquisition service) and INTERPLEX (private message-switched networks).

Charges

Some increases were necessary in telegrams tariffs from 1 April 1983 due to the high cost, labour-intensive nature of the service, and some minor charges in the international telephone service were introduced or increased from 1 October 1983.

Detailed information on OTC

The Commission reports on its operations to Parliament through its Minister about October each year. Traffic, financial and other information is contained in its Annual Report, copies of which are available on request from the OTC.

International telecommunication traffic

The following table shows particulars of overseas telecommunication traffic between Australia and overseas countries for the years ended 31 March 1982 and 1983.

INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1982 AND 1983

		Transmissions					
		From Australia		*To Australia*		*Total*	
Service		*1981–82*	*1982–83*	*1981–82*	*1982–83*	*1981–82*	*1982–83*
Telephone	'000 paid minutes	109,960	132,375	82,900	97,600	192,860	229,975
Telex	'000 paid minutes	22,648	26,325	23,450	26,275	46,098	52,600
Television programs . .	paid minutes	10,899	25,850	77,237	85,525	(*a*)97,051	(*b*)120,782
Telegraph services . . .	'000 words	48,845	36,141	35,592	25,947	84,437	62,088

(*a*) Includes 8,915 paid minutes of television programs distributed within Australia by OTC. (*b*) Includes 9,407 paid minutes of television programs distributed within Australia by OTC.

Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, and one at Norfolk Island. During the year ended 31 March 1983 the Coastal Radio Service handled 8,533,000 paid words to ships and 4,219,000 words from ships. Ship calls over the radiotelephone service amounted to 618,000 paid minutes and the radiotelex service handled 119,000 paid minutes. Usage of radiotelephone and radiotelex leased services amounted to 4,367 and 9,360 hours respectively.

Radiocommunication stations authorised

At 30 June 1978 there were 460,171 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 6,316 were stations established at fixed locations, 24,000 were land stations which were established at fixed locations for communication with mobile stations, 13 were space and broadcasting stations, 420,442 were mobile stations and 9,400 were amateur stations. Particulars of broadcasting stations are shown on page 486.

BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act* 1942, is one of the responsibilities of the Minister for Communications. Federal bodies which are involved include the Australian Telecommunications Commission, the Australian Broadcasting Commission (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Department of Communications and the Overseas Telecommunications Commission.

Basically, the Australian broadcasting system is comprised of the following types of stations:

- national radio and television stations broadcasting programs produced by the Australian Broadcasting Corporation;
- commercial radio and land television stations operated by companies under licence;
- public radio stations operated by corporations under licence on a non-profit basis; and
- stations operated under the aegis of the Special Broadcasting Service.

As from 1 January 1977, the Minister for Communications assumed the responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

The Commercial Radio and Television Service

Commercial radio and television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Communications. The stations obtain income from the broadcasting of advertisements. At 30 June 1983 there were 137 commercial radio stations in operation in Australia. Call signs for radio stations are prefixed by numerals indicating each State of Australia. (2—New South Wales, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition there were fifty commercial television stations and 121 commercial television translator stations in operation in Australia. A television translator station is a station of low power designed to receive the signals of another station and re-transmit them; it does not originate programs. There are nine limited coverage repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape.

The Public Broadcasting Service

The Broadcasting and Television Act also makes provision for the grant of licences for the operation of public radio and television stations. At 30 June 1983, 38 public radio stations were broadcasting "special purpose" programs ranging from fine music to ethnic languages. A number of public radio stations are associated with tertiary educational institutions. There are no public television services in operation.

The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of mutilingual television services was gazetted in August 1978. The Service is also empowered by the *Broadcasting and Television Act* 1977 to provide broadcasting and television services for such special purposes as are prescribed by the Government.

In carrying out its functions the SBS provides:

- *multilingual broadcasting services to*:
  - the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 42 languages for 126 hours per week
  - the Sydney metropolitan area through radio station 2EA which broadcasts in 48 languages for 126 hours per week
  - the provincial centres of Newcastle and Wollongong in N.S.W. through 2EA translator stations.
- subsidies to public broadcasting stations in Adelaide, Brisbane, Canberra, Hobart, Perth, Albury, Armidale, Bathurst, Lismore and Newcastle for the production and presentation of ethnic radio programs.
- a subsidy to Whyalla Ethnic Broadcasters Inc. for the production of ethnic radio programs for presentation on commercial radio station 5AU Whyalla.
- *a multicultural television service* on VHF Channel 0 and UHF Channel 28 to the Sydney and Melbourne metropolitan areas and Geelong.

Broadcasting services

The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977 and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervising of the operations (other than technical aspects) of all stations except national stations. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, and to determine the hours of transmission of licensed stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister. The Tribunal may also conduct enquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct.

The National Broadcasting Service

In sound broadcasting the programs of the National Broadcasting Service are provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications.

Technical facilities. At 30 June 1983 the National Broadcasting Service comprised 136 transmitting stations, of which ninety-five were medium frequency, twenty-five frequency modulation and sixteen high frequency (six internal and ten Radio Australia).

The medium-frequency transmitters operate in the broadcast band 526.5 to 1,606.5 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programs provided by country stations are relayed from the capital cities using high-quality program transmission lines. A number of program channels are utilised to link national broadcasting stations in the capital cities of Australia. When necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1983 eighty-one of the ABC's medium-frequency stations were situated outside the six State capital cities.

Program facilities. The programs of the Australian Broadcasting Corporation cover a wide range of activities. The proportions of broadcasting time allocated on Radio 1 stations to the various types of program during 1982–83 were as follows: entertainment 56.0 per cent; news 8.6 per cent; sporting 13.7 per cent; spoken word 11.8 per cent; drama and features 0.2 per cent; parliament 6.8 per cent; religious 1.4 per cent; rural 0.8 per cent; and presentation 0.6 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.2 per cent; light music 0.4 per cent; entertainment 3.7 per cent; drama and features 5.8 per cent; education 5.5 per cent; spoken word 13.8 per cent; religious 3.8 per cent; news 8.5 per cent; rural 3.2 per cent; and presentation 1.5 per cent. Radio 3 (regional) stations feature a higher proportion of news and rural programs. Further particulars of the operations of the Australian Broadcasting Corporation in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in the Annual Report of the ABC.

Overseas Broadcasting Service

There are six high-frequency stations at Shepparton, two at Lyndhurst, Victoria and two at Carnarvon, Western Australia which provide the overseas service known as Radio Australia. As in the case of the National Broadcasting Service, these stations are maintained and operated by Telecom Australia, and their programs are arranged by the ABC. The programs, which, as well as entertainment, give news and information about Australia presented objectively, are directed to most parts of the world but with special emphasis on Asia and the Pacific. They include 67 news bulletins a day. The overseas audience has been quite substantial in recent years, as evidenced by a large number of letters from listeners abroad (233,687 in 1981–82, and 208,095 in 1982–83), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1983

Type of station	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
National—									
Medium frequency	21	6	21	10	23	6	6	2	95
High frequency	1	2	2	–	1	–	–	–	6
Frequency modulation	7	6	4	3	2	2	–	1	25
Overseas—									
Short wave (Radio Australia)	–	8	–	–	2	–	–	–	10
Commercial—									
Medium frequency	43	24	29	10	17	8	2	2	135
Frequency modulation	2	2	1	1	1	–	–	–	7
Public broadcasting—									
Medium frequency	2	2	1	1	1	–	–	1	(*a*)8
Frequency modulation	8	4	3	2	2	2	2	–	23

(*a*) Includes broadcasting stations 2EA and 3EA operated by the Special Broadcasting Service.

Television services

The National Television Service

The National Television Service is provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1983, 273 stations were operating—85 transmitters and 188 translator stations.

The television programs provided by the Australian Broadcasting Corporation cover a wide range of activities. The proportions of television time allocated among the ABC's various departments at 30 June 1983 were as follows: drama 17.76 per cent; public interest 12.40 per cent; sporting 18.89 per cent; news 6.50 per cent; variety and acts 5.20 per cent; education 25.8 per cent; musical performance 1.02 per cent; religious 1.08 per cent; special arts and aesthetics 4.40 per cent; panel and quiz games 0.22 per cent; and presentation 6.43 per cent. The average weekly transmission time for the 273 national television transmitters was ninety-four hours during the year ended 30 June 1983.

During the year ended 30 June 1983, twenty two new national translator channels went into operation—one in New South Wales, one in Victoria, eight in Queensland, three in South Australia, seven in Western Australia, one in Tasmania, and one in the Northern Territory.

Colour television

Colour television (PAL) was introduced in Australia late in 1974 and services became fully effective in March 1975.

TELEVISION AND TRANSLATOR STATIONS: 30 JUNE 1982

Type of station and location	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
National—									
Metropolitan television .	1	1	1	1	1	1	1	1	8
Country television . . .	13	8	31	5	15	2	3	–	77
Translator	38	13	53	15	41	15	12	1	188
Total, National . .	*52*	*22*	*85*	*21*	*57*	*18*	*16*	*2*	*273*
Commercial—									
Metropolitan television .	3	3	3	3	2	1	1	1	17
Country television . . .	11	6	8	3	4	1	–	–	33
Translator	36	12	24	5	7	17	–	1	102
Total, Commercial . .	*50*	*21*	*35*	*11*	*13*	*19*	*1*	*2*	*152*

BIBLIOGRAPHY

ABS Publications

Monthly Summary of Statistics, Australia (two monthly) (1304.0)
Digest of Current Economic Statistics, Australia (two monthly) (1305.0)
Commonwealth Government Finance (5502.0)
Shipping and Air Cargo Commodity Statistics, Australia (two monthly) (9206.0)
Shipping and Cargo, Australia (two monthly) (9211.0)
Rail Transport, Australia (9213.0)
Registration of New Motor Vehicles, Australia (monthly) (9301.0)
Motor Vehicle Registrations, Australia (monthly) (9303.0)
Motor Vehicle Registrations, Australia (9304.0)
Road Traffic Accidents Involving Fatalities, Australia (monthly) (9401.0)
Road Traffic Accidents Involving Casualties (Admissions to hospitals), Australia (quarterly) (9405.0)

Other Publications

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport, the Department of Aviation, the various harbour boards and trusts, the several Government railway authorities, the Australian Postal Commission, the Australian Telecommunications Commission, and the Australian Broadcasting Corporation.

CHAPTER 21

PRIVATE FINANCE

This chapter contains statistics on the activities and structure of financial institutions including banks, building societies, insurance companies, finance companies, credit unions and co-operative societies together with descriptions of their operations and relevant controlling legislation.

MONEY

Currency

Australia has a decimal system of currency, the unit being the dollar which is divided into 100 cents. Australian notes are issued in the denominations of $1, $2, $5, $10, $20 and $50 and coins in the denominations of 1c, 2c, 5c, 10c, 20c and 50c.

For additional information on note issues and coinage, refer to the List of Special Articles, etc. towards the back of this Year Book.

AUSTRALIAN NOTES ON ISSUE

($ million)

	Last Wednesday in June					
	1978	*1979*	*1980*	*1981*	*1982*	*1983*
$1	60.8	64.7	68.6	74.1	78.8	81.4
$2	136.0	140.6	145.1	152.7	158.4	162.9
$5	126.7	135.5	143.2	153.9	165.6	174.1
$10	604.5	582.4	567.6	555.9	546.7	531.5
$20	1,620.5	1,756.4	1,903.9	2,060.0	2,169.8	2,195.8
$50	1,121.7	1,427.7	1,757.8	2,190.7	2,718.2	3,216.4
Total	**3,670.2**	**4,107.4**	**4,586.1**	**5,187.3**	**5,837.5**	**6,362.2**
Held by banks	*413.1*	*451.1*	*500.9*	*578.1*	*677.4*	*712.6*
Held by public	*3,257.1*	*3,656.3*	*4,085.2*	*4,609.2*	*5,160.1*	*5,649.6*

AUSTRALIAN DECIMAL COIN: NET ISSUES BY RESERVE BANK

($ million)

	Last Wednesday in June					
	1978	*1979*	*1980*	*1981*	*1982*	*1983*
1c	1.3	1.2	1.3	1.5	1.4	1.2
2c	2.4	1.9	2.4	2.9	2.7	1.7
5c	2.9	3.4	4.4	5.1	5.0	3.4
10c	3.5	3.7	4.9	5.8	6.2	4.3
20c	7.4	8.2	11.8	14.8	12.8	9.0
50c	15.4	10.0	12.3	12.1	26.8	22.1
Total	**32.9**	**28.4**	**37.0**	**42.1**	**54.9**	**41.7**

Volume of money

Statistics of the volume of money in the following table include notes and coins in the hands of the public, deposits of the public with trading banks (including the Reserve Bank) and deposits with all savings banks. Volume of money is a measure of specified financial assets held by the non-bank public.

The financial assets included in the volume of money in the table represent only part (albeit a major part) of the public's total holdings of liquid financial assets. An expanded view of the volume of money would include the public's holdings of such other claims as finance company debentures, deposits and shares of building societies, loans to authorised dealers in the short-term money market, government securities, etc.

VOLUME OF MONEY

(*Source:* Reserve Bank of Australia)

($ million)

Average of weekly figures for June	*Notes and coins in the hands of public*	*Deposits of public with all trading banks*			*Deposits with all savings banks(c)*	*Total volume of money*
		Current(a)	*Fixed(a)*	*Certificates of deposit(b)*		
1978	3,542	7,724	9,314	718	17,854	39,151
1979	3,963	9,183	10,449	529	19,654	43,777
1980	4,420	10,423	10,243	3,012	21,061	49,159
1981	4,977	11,650	13,767	1,966	23,028	55,387
1982	5,570	11,325	16,948	3,002	24,808	61,653
1983	6,078	11,799	18,676	3,248	29,568	69,370

(*a*) Excludes deposits of the Commonwealth and State Governments and inter-bank deposits. (*b*) Excludes holdings of the Commonwealth and State Governments and banks. (*c*) Interpolated 'weekly average' based on end-of-month figures.

FINANCIAL REGULATION

Commonwealth legislation for economic management

With Federation in 1901 the new Commonwealth Parliament was given power under Section 51 of the Commonwealth Constitution to legislate with respect to 'Banking, other than State Banking, also State Banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'. In 1911 the Commonwealth entered the field of banking with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations.

From 1911 to 1945 the functions of central banking became more and more the responsibility of the Commonwealth Bank and in 1945 the Commonwealth Parliament directed it to act as a central bank. In the ensuing period of economic growth and financial development, the need for effective regulatory control of finance through banks became increasingly recognised. During 1959 the Commonwealth Parliament enacted the following legislation:

(*a*) The *Banking Act* 1959 which applies to all banks operating in Australia, including the external territories of the Commonwealth, except State banks trading in their own State. The objects of the Act are:
  (i) to provide a legal framework uniform throughout Australia for regulating the banking system;
  (ii) to safeguard depositors of the banks from loss;
  (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank;
  (iv) to control the volume of credit in circulation and bank interest rates; and
  (v) to provide machinery for the control of foreign exchange.

(*b*) The *Reserve Bank Act* 1959 which provides for the constitution and management of the Reserve Bank of Australia, the administration of the *Banking Act* 1959 and the management of the Australian note issue.

(*c*) The *Commonwealth Banks Act* 1959 which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and the Commonwealth Development Bank of Australia.

Information on more specific aspects of the growth and control of the banking industry is contained in earlier issues of the Year Book (Nos. 31, 37, 45, 46 and 61).

More recently, as a result of the further development of the financial market and the increasing significance in the market of the non-bank financial institutions such as finance companies, building societies and money market dealers, the *Financial Corporations Act* 1974 was introduced. The object of this Act is to assist the Government to achieve effective management of the Australian economy by providing a means for the examination and regulation of the activities of non-bank financial institutions having regard to economic stability, the maintenance of full employment, the efficient allocation of productive resources, the ensuring of adequate levels of finance for housing and the economic prosperity and welfare of the people of Australia. Details of the operation and application of the Act are given in Year Book No. 62, page 541.

Other Commonwealth legislation directly affecting financial institutions

Insurance. Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to 'insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned'. Commonwealth legislation includes the *Marine Insurance Act* 1909 defining the limits of marine insurance and regulating the terms of contracts, etc.; the *Life Insurance Act* 1945 generally regulating life insurance business in Australia; and the *Insurance Act* 1973 generally regulating general (non-life) insurance business in Australia. The *Marine Insurance Act* 1909 has limited application.

Life Insurance Act 1945. The objects of this Act are:

(*a*) to replace all State legislation on the subject of life insurance except that relating to the life insurance operations of State government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia;

(*b*) to appoint a Life Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; and

(*c*) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 20 June 1946. The Life Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

Insurance Act 1973. The objects of this Act are:

(*a*) to appoint an Insurance Commissioner to exercise active supervision of the activities of companies conducting general (non-life) insurance business, apart from State government insurance whether or not extending beyond the limits of the State concerned and other organisations specified in the Act, with a view to securing the greatest possible protection for policy holders; and

(*b*) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 19 June 1973. The Insurance Commissioner issues an annual report which contains detailed information on the operations of insurance companies.

State legislation

In each State there exists legislation designed to regulate the activities and monitor the solvency position of particular types of financial institutions which operate on a co-operative basis and lend predominantly to members or consumers. In general, they form the groups covered later in this chapter under the headings of Permanent Building Societies, Terminating Building Societies and Credit Unions.

In some States there is also legislation for the incorporation of State government bodies which operate as banks or insurance offices. Though the regulations in Commonwealth legislation do not directly apply to these bodies, details of their operations have been included in the relevant parts of this chapter because they have agreed to supply information consistent with regulatory reports on a voluntary basis.

BANKS

Reserve Bank of Australia

The Reserve Bank of Australia preserved and continued in existence the original corporate body known as the Commonwealth Bank of Australia under the new name Reserve Bank of Australia.

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act* 1959, which states:

> 'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act* 1959, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to:
>
> (*a*) the stability of the currency of Australia;
>
> (*b*) the maintenance of full employment in Australia; and
>
> (*c*) the economic prosperity and welfare of the people of Australia'.

Management

The policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the

Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

Central Banking Business

Under the *Commonwealth Bank Act* 1911 and the war-time powers conferred by the National Security Regulations, the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act* 1945 formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, these powers being carried through into the present Act constituting the Reserve Bank.

Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes.

Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance is not to exceed one year.

RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS
($ million)

LIABILITIES

				Deposits of trading banks				
30 June	*Capital and reserve funds*	*Special reserve—IMF special drawing rights*	*Australian notes on issue*	*Statutory reserve deposit accounts*	*Other*	*Deposits of savings banks*	*All other liabilities*	*Total*
1978	1,189.3	218.3	3,688.1	726.7	10.7	1,122.6	1,723.0	8,678.8
1979	1,953.5	321.3	4,113.3	1,115.5	21.0	815.7	1,906.2	10,246.5
1980	4,061.8	389.6	4,549.3	1,376.1	9.6	553.3	1,067.5	12,007.1
1981	3,160.8	388.1	5 094.1	1,846.1	9.0	128.8	1,252.9	11,879.8
1982	2,553.2	352.3	5,837.5	2,118.4	23.0	195.3	1,667.3	12,746.9
1983	4,392.3	351.7	6,413.6	2,237.0	6.2	1.9	2,120.5	15,523.2

ASSETS

30 June	*Gold and foreign exchange (a)*	*Australian Government securities (b)*	*Loans, advances, bills discounted*	*Bank premises (c)*	*All other assets*	*Total*
1978	3,047.6	4,365.8	707.0	72.5	485.8	8,678.8
1979	3,706.8	5,173.2	613.6	89.9	663.0	10,246.5
1980	5,504.3	5,197.6	608.3	112.1	584.8	12,007.1
1981	5,454.4	4,728.1	837.3	149.2	710.8	11,879.8
1982	6,518.5	4,771.2	573.0	160.3	723.9	12,746.9
1983	10,751.5	3,471.8	417.5	165.2	717.2	15,523.2

(*a*) Includes currency at short call and International Monetary Fund drawing rights. (*b*) Includes Treasury bills and Treasury notes. (*c*) At cost, less amounts written off.

Trading banks

Commercial banking in Australia is conducted by eleven trading banks. Three large private trading banks, together with the Commonwealth Trading Bank, are generally referred to as the major trading banks. These banks provide widespread banking facilities throughout Australia. The remaining seven banks comprise one small local bank, two overseas banks which have been represented in Australia for many years, three State-owned banks operating only within their respective States and one private bank.

The major trading banks are as follows: Commonwealth Trading Bank of Australia; Australia and New Zealand Banking Group; Westpac Banking Corporation; and the National Commercial Banking Corporation of Australia Ltd.

The other trading banks are: Bank of Queensland Ltd; Bank of New Zealand; Banque Nationale de Paris; The State Bank of New South Wales (previously The Rural Bank of New South Wales); State Bank of South Australia; The Rural and Industries Bank of Western Australia (General Banking Department); and the Australian Bank Ltd.

Liabilities and assets

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks within the years shown.

AUSTRALIAN TRADING BANKS(*a*): LIABILITIES AND ASSETS(*b*)

($ million)

LIABILITIES

	Paid-up capital	*Reserve funds (used in business of banks)(c)*	*Final dividend proposed*	*Balance of profit and loss account*	*Total share-holders' funds(c)*	*Balances due to other banks*	*Deposits, bills payable and other liabilities(d)*	*Total*
1977 . . .	529.7	663.3	37.1	72.9	1,303.0	1,741.9	26,286.1	29,331.1
1978	594.6	796.7	42.7	104.1	1,538.0	2,356.2	28,697.7	32,591.9
1979	692.9	1,203.5	55.6	145.6	2,097.6	2,914.0	33,511.1	38,522.7
1980	769.6	1,450.3	69.8	201.5	2,491.2	3,488.6	38,593.4	44,573.2
1981	859.3	1,719.1	89.6	304.3	2,972.4	4,217.6	45,661.5	52,851.5
1982	1,146.2	1,927.9	108.2	367.8	3,550.1	6,641.7	56,131.1	66,322.9

ASSETS

			Australian public securities					
			Australian Government					
	Coin, bullion, notes and cash at Reserve Bank	*Money at short call overseas*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Other public securities*	*Other securities*	*Loans to authorised dealers in short-term money market*
1977 . . .	338.2	82.4	93.3	3,531.5	117.3	197.1	630.8	368.5
1978	357.6	144.3	192.3	3,874.5	143.6	440.9	698.5	693.2
1979	368.7	162.6	154.5	4,156.5	183.9	419.5	892.8	580.0
1980	523.9	270.0	284.3	4,270.6	315.3	277.1	1,227.6	624.0
1981	576.9	169.8	693.2	4,597.6	329.4	222.5	1,565.7	454.6
1982	616.1	399.3	817.6	5,440.6	324.5	94.8	2,876.2	77.2

	Statutory reserve deposit account with Reserve Bank	*Cheques and bills of, and balances with and due from other banks*	*Loans, advances and bills discounted*	*Bank premises, furniture and sites*	*Bills receivable and remittances in transit*	*All other assets*	*Total*
1977 . . .	1,293.2	1,444.9	17,182.8	445.2	1,896.7	1,709.0	29,331.1
1978	666.6	1,534.9	18,768.2	504.2	2,173.7	2,399.3	32,591.9
1979	1102.5	2,424.2	21,509.3	554.3	2,414.0	3,599.8	38,522.7
1980	1,373.6	2,771.9	24,705.7	595.8	1,841.2	5,492.2	44,573.2
1981	1,826.0	3,190.4	29,376.9	700.2	2,077.8	7,070.6	52,851.5
1982	2,096.3	4,564.8	35,826.5	816.8	2,281.0	10,091.3	63,322.9

(*a*) Excludes the overseas banks but includes the deposits and assets held against the deposits of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (*b*) Relates to liabilities and assets both inside and outside Australia. (*c*) Includes inner reserves from 1979. (*d*) Includes inner reserves to 1978.

Figures shown in the table below are the average of liabilities and assets within Australia (including external territories) of the banks on the weekly balance days (Wednesdays) during the period concerned.

ALL TRADING BANKS: AVERAGE LIABILITIES AND ASSETS WITHIN AUSTRALIA

($ million)

LIABILITIES(*a*)(*b*)

	Deposits repayable in Australia						
		Current					
June	*Fixed*	*Bearing interest*	*Not bearing interest*	*Total*	*Balances due to other banks*	*Bills payable and all other liabilities to the public*	*Total*
1978 . . .	11,596.0	1,045.0	7,105.3	19,746.2	682.8	2,907.5	23,336.6
1979	12,577.3	1,159.8	8,441.8	22,178.9	900.4	4,347.9	27,427.1
1980	14,755.5	1,247.7	9,639.9	25,643.2	790.0	5,555.3	31,988.5
1981	17,187.8	1,218.4	10,899.7	29,305.9	827.2	7,302.9	37,436.0
1982	21,613.8	1,260.7	10,628.4	33,503.0	1,140.2	11,193.9	45,837.0
1983	23,643.8	1,702.0	10,694.4	36,040.3	1,337.6	15,056.2	52,434.1

ASSETS(*b*)

		Australian Government securities							
June	*Coin, bullion, notes and cash at Reserve Bank*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Loans to authorised dealers in short-term money market*	*Statutory reserve deposit account with Reserve Bank*	*Loans, advances and bills discounted*	*All other assets*	*Total*
1978	409.4	97.9	3,609.1	45.1	190.9	734.0	15,683.1	3,920.2	24,689.7
1979	435.3	204.4	3,951.2	71.8	265.3	1,125.5	17,653.3	5,443.4	29,150.2
1980	485.6	182.8	4,118.1	205.1	384.3	1,385.6	20,385.7	6,928.5	34,075.7
1981	550.4	840.0	4,416.8	219.8	264.7	1,852.6	22,998.4	8,708.4	39,851.1
1982	639.0	502.1	4,984.5	239.8	336.3	2,113.1	26,213.3	13,110.7	48,139.0
1983	620.4	537.6	5,395.1	123.4	193.0	2,238.2	28,646.3	17,138.0	54,892.0

(*a*) Excludes shareholders' funds. (*b*) Excludes inter-branch accounts and contingencies.

Major trading banks: classification of advances and deposits

In the classification of advances and deposits, borrowers and lenders are classified into two main groups:

Residents—comprising all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia; and

Non-residents—comprising all other persons and institutions, including companies incorporated abroad, which, although represented, do not carry on business in Australia.

Residents are further classified into:

Businesses—partnerships, companies and other institutions engaged in business in Australia; individuals actively engaged in business or a profession on their own behalf; and mutual, co-operative and benefit societies which distribute their profits to members by way of dividends, rebates of charges for goods and services, or increased benefits.

Public authorities—local and semi-government authorities including separately constituted government business undertakings, but not the Commonwealth and State Governments.

Persons—individuals other than those carrying on a business or profession.

Non-profit organisations—organisations which are not operated for the purpose of making a profit or gain to individual members, but for the purposes of the organisations or for the benefit of the community in general.

MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES AND DEPOSITS WITHIN AUSTRALIA

($ million)

	Advances				*Deposits*			
	At second Wednesday of:				*At second Wednesday of:*			
	July 1981	*January 1982*	*July 1982*	*January 1983*	*July 1981*	*January 1982*	*July 1982*	*January 1983*
Residents								
Businesses								
Agriculture, grazing and dairying	2,528.5	2,513.1	2,722.0	2,817.1	1,481.4	2,112.3	1,522.8	1,720.1
Manufacturing	2,196.3	2,313.2	2,496.4	2,402.4	665.7	715.4	627.2	760.5
Transport, storage and communication	377.4	399.4	400.8	407.8	222.7	247.0	247.0	241.7
Finance	907.8	986.4	1,014.1	1,043.4	1,219.6	1,496.7	1,559.6	2,115.0
Commerce	2,142.3	2,184.5	2,450.6	2,198.3	1,038.0	1,210.4	995.7	1,199.9
Building and construction . .	558.9	524.0	571.5	561.5	505.4	544.8	515.4	600.4
Other businesses	2,669.1	2,861.9	2,929.8	3,027.0	2,919.3	2,893.8	2,828.1	2,860.9
Unclassified	377.7	469.5	621.3	447.0	527.0	736.3	902.2	674.1
Total business	*11,758.0*	*12,252.0*	*13,206.5*	*12,904.5*	*8,579.2*	*9,956.5*	*9,198.0*	*10,172.7*
of which								
Companies	6,680.9	7,146.2	7,785.5	7,114.0	4,065.0	4,382.5	4,389.3	4,888.3
Other	5,077.1	5,105.8	5,421.0	5,790.5	4,514.1	5,574.0	4,808.8	5,284.3
Public authorities	164.2	237.7	265.9	241.9	1,664.8	1,719.2	1,860.1	2,007.5
Persons	7,931.0	8,553.8	8,967.3	9,456.1	12,217.6	13,165.8	13,458.7	14,314.9
Non-profit organisations . . .	164.2	186.6	176.1	206.2	988.6	977.8	1,064.3	1,057.4
Total residents	*20,017.5*	*21,230.1*	*22,615.8*	*22,808.6*	*23,450.2*	*25,819.3*	*25,581.1*	*27,552.5*
Total non-residents	*37.2*	*32.2*	*25.0*	*36.4*	*446.0*	*460.6*	*483.0*	*566.2*
Total	**20,054.7**	**21,262.3**	**22,640.8**	**22,845.0**	**23,896.1**	**26,279.9**	**26,064.1**	**28,118.7**

Interest rates

At 30 June 1983, the maximum rates of interest were: (i) on fixed deposits of less than $50,000, for periods of 3 months and less than 6 months—11.00 per cent to 13.20 per cent, 6 months and less than 2 years—11.25 per cent to 13.25 per cent, 2 years and less than 4 years—11.00 per cent to 12.00 per cent; (ii) on fixed deposits of $50,000 and over, 30 days to 4 years—not subject to maximum rate; (iii) on certificates of deposit of $50,000 and over, 3 months to 4 years—not subject to maximum rate; (iv) on overdrafts under $100,000—13.50 per cent to 14.00 per cent; (v) on overdrafts over $100,000 not subject to maximum rate; (vi) on personal loans—9.00 per cent to 9.75 per cent.

Branches and agencies

At 30 June 1983 the major trading banks operated 4,767 branches, and the other trading banks 420 branches. Of the total 5,187 branches, 2,812 were located in metropolitan areas. Trading bank facilities were also available at 1,101 agencies throughout Australia.

Debits to customers' accounts

TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS(*a*)

($ million)

June	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1978 . . .	7,316.5	5,552.6	1,528.1	846.8	1,079.7	190.9	35.7	246.0	16,796.3
1979 . . .	8,147.8	7,050.1	1,712.4	924.5	1,370.3	243.8	43.1	186.9	19,678.9
1980 . . .	10,516.4	7,854.9	2,108.4	1,021.0	1,498.7	268.0	76.1	240.0	23,583.6
1981 . . .	12,319.1	8,871.0	2,522.5	1,169.6	1,821.4	280.6	78.4	346.8	27,409.3
1982 . . .	17,918.1	13,027.4	3,448.5	1,700.0	2,501.2	334.4	96.2	567.7	39,593.4
1983 . . .	17,788.4	13,679.3	3,926.4	1,727.2	2,592.5	332.0	95.1	834.1	40,974.9

(*a*) Covers all trading banks and in addition the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to the Commonwealth and State Government accounts in capital cities.

Savings banks

Prior to 1956, savings bank operations were conducted by the Commonwealth Savings Bank, two trustee savings banks in Tasmania, and State-owned banks in Victoria, South Australia and Western Australia. In January 1956 private savings banks were established as subsidiary companies by two of the private trading banks. By mid-1962 all the major private trading banks had established savings bank subsidiary companies. In May 1972 the Bank of New Zealand Savings Bank Limited was granted an authority to carry on savings bank business in Australia.

All savings banks, including trustee savings banks but not State savings banks, are subject to the *Banking Act* 1959.

Liabilities and assets

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks falling within the years shown.

SAVINGS BANKS (*a*): LIABILITIES AND ASSETS (*b*)
($ million)

LIABILITIES

	Paid-up capital	*Reserve funds (used in the business of the bank) (c)*	*Balance of profit and loss account*	*Total share-holders' funds (c)*	*Deposi-tors' balances*	*Balances due to other banks*	*Bills payable and all other liabilities (d)*	*Total*
1977 . . .	60.0	302.9	19.1	381.9	16,432.0	133.7	682.5	17,630.0
1978 . . .	60.0	370.8	22.6	453.4	18,078.7	86.1	751.4	19,369.6
1979 . . .	85.0	639.2	32.9	757.1	19,811.6	105.1	622.9	21,296.7
1980 . . .	92.0	737.2	41.8	871.1	21,276.8	110.4	732.4	22,990.7
1981 . . .	92.0	858.2	51.1	1,001.4	23,070.2	139.7	876.3	25,087.5
1982 . . .	90.5	916.5	66.2	1,073.2	24,919.1	303.2	1,329.6	27,625.1

ASSETS

			Australian public securities			
			Commonwealth and State Governments			
	Coin, bullion, notes and deposits with Reserve Bank	*Deposits in Australia with trading banks*	*Treasury bills and notes*	*Other securities*	*Local and semi-government securities*	*Other securities*
1977	1,136.2	283.4	53.9	2,643.7	4,472.2	48.6
1978	1,146.9	218.4	97.1	2,514.5	4,899.8	54.5
1979	850.5	258.7	594.6	2,469.0	5,303.6	53.4
1980	616.6	252.2	1,070.6	2,112.9	5,662.8	56.8
1981	267.5	304.2	1,553.1	2,170.1	6,028.5	65.9
1982	233.9	323.0	1,711.8	2,103.3	5,930.7	105.2

	Loans to authorised dealers in short-term money market	*Cheques and bills of, and balances with and due from other banks (e)*	*Loans advances and bills discounted*	*Bank premises, furniture and sites*	*Bills receivable and re-mittances in transit*	*All other assets*	*Total*
1977	67.9	300.1	8,056.5	240.6	81.3	245.6	17,630.0
1978	118.0	351.4	9,371.4	276.6	71.2	249.6	19,369.6
1979	137.5	372.8	10,614.1	317.8	47.5	277.4	21,296.7
1980	178.9	406.8	11,930.8	365.9	70.4	265.9	22,990.7
1981	133.4	381.1	13,384.7	409.8	62.5	326.7	25,087.5
1982	116.2	502.4	15,199.5	449.1	383.5	566.5	27,625.1

(*a*) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (*b*) This table relates to liabilities and assets both inside and outside Australia. (*c*) Includes inner reserves from 1979. (*d*) Includes inner reserves to 1978. (*e*) Includes deposits with and loans to specified lenders other than trading banks.

Branches and agencies

At 30 June 1983 the savings banks operated 5,698 branches and 11,831 agencies, of which 3,171 branches and 5,649 agencies were in metropolitan areas.

Development banks

Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the former Commonwealth Bank of Australia. The functions of the Development Bank are to provide finance for the purpose of primary production (which includes fishing, forestry and all forms of rural activity) and for the establishment or development of small business undertakings (i.e. with shareholders'/proprietors' funds not exceeding $3 million) in cases where such finance is not otherwise available on reasonable and suitable terms and conditions.

Two types of facility are provided—loans over medium to long terms and equipment finance over short terms. Loans to primary industry may be for all types of farm development, property purchase and restructuring of private mortgage debt. Loans to small businesses may be for establishment of new enterprises or for development of existing businesses in all sectors including manufacturing, retail and wholesale trade, transport, tourism, professions, entertainment and service industries. Equipment finance is provided for the acquisition of plant and vehicles for both primary industry and business undertakings.

The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation and its policy is determined by the Board of that Corporation.

Australian Resources Development Bank Limited

The Australian Resources Development Bank Limited was established in 1967 with equity capital of $3 million subscribed by the major trading banks. It was given the status of a bank under the *Banking Act* 1959 and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

The Primary Industry Bank of Australia Limited

The Primary Industry Bank of Australia Limited commenced operations on 22 September 1978 under the authority of the *Primary Industry Bank Act* 1977. The Bank has also been brought within the scope of the *Banking Act* 1959 including those provisions relating to the protection of depositors, advances policy, control of interest rates, furnishing of statistics, and alterations in the structure and ownership of the Bank.

The main objective of the Bank is to facilitate the provision of loans to primary producers for longer terms than are otherwise generally available. The Bank's role is restricted to refinancing loans made by banks and other financial institutions with terms of eight years or more but not exceeding thirty years.

The equity capital of the Bank is $5,625,000 consisting of eight shares. Seven shares are held by the Commonwealth Government and the major trading banks while the eighth share is held equally by the four State banks.

REGISTERED BUILDING SOCIETIES

Permanent building societies

A permanent building society is defined as an organisation that: (a) is registered under relevant State or Territory legislation; (b) has rules or regulations that do not specify that it is to terminate on a specific date or when a specific objective is achieved; and (c) operates on a co-operative basis by borrowing predominantly from its members and providing finance to its members principally in the form of housing loans.

In 1976 a statistical collection was introduced covering the financial accounts of permanent building societies in all States and Territories of Australia. The statistics below summarise information collected from the 105 permanent building societies balancing in the 1981–82 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Permanent Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5632.0).

Information relating to the housing finance operations of permanent building societies is provided on pages 511-2. Detailed statistics on the operations generally of permanent building societies are available in the monthly publication *Housing Finance for Owner Occupation, Permanent Building Societies, Australia* (5610.0).

Summary statistics on the financial operations, assets and selected liabilities of permanent building societies registered under the *Financial Corporations Act* 1974, and which have assets in Australia exceeding $5 million, are given on pages 503-4.

PERMANENT BUILDING SOCIETIES:
LIABILITIES AND ASSETS(*a*)
($ million)

Liabilities	*1981–82*	*Assets*	*1981–82*
Share capital and reserves:		Amount owing on loans	10,303.7
Non-withdrawable shares	31.4		
Withdrawable shares	9,149.2	Cash on hand	21.8
Reserves—		Deposits with—	
Statutory	140.8	Banks	838.0
Other(*b*)	211.1	Other	322.6
Deposits	3,753.3	Bills, bonds and other securities	1,691.1
Loans	248.3	Accounts receivable	47.8
Accounts payable	61.6	Physical assets	424.5
Other liabilities	66.2	Other assets	12.3
Total liabilities	**13,661.8**	**Total assets**	**13,661.8**

(*a*) At the balance dates of societies within the financial year shown. (*b*) Includes accumulated surpluses and deficits.

PERMANENT BUILDING SOCIETIES:
INCOME AND EXPENDITURE
($ million)

Expenditure	*1981–82*	*Income*	*1981–82*
Interest on:		Interest from:	
Shares	912.2	Loans	1,379.3
Deposits	399.5	Deposits	151.8
Loans	23.2		
Wages and salaries	105.5	Income from holdings of securities	212.1
Management fees(*a*)	42.4		
Administrative expenses(*b*)	107.1	Management fees	19.4
Insurance premiums paid	2.6		
Other expenditure	82.6	Other income	21.1
Total expenditure	**1,675.0**	**Total income**	**1,783.6**

(*a*) Represents payments made by societies to separate management companies. (*b*) Includes Permanent Building Society Association costs, advertising, bank charges and other administrative expenses.

Terminating building societies

A terminating building society is defined as an organisation that: (a) is registered under relevant State or Territory legislation; (b) has rules or regulations which specify that it is to terminate on a specific date or when a specific objective is achieved; and (c) provides finance to its members in the form of housing loans from funds obtained from lending institutions (usually government guaranteed), members' subscriptions, or from moneys provided under Commonwealth-State Housing Agreements.

During 1981-82 the NSW legislation governing terminating building societies was amended to require societies with common boards of directors, a common registered office, and the same institutional lender, to amalgamate to form a single society called a co-operative housing society, whose rules no longer require it to terminate. As a result of these changes a review of the definitions used in the publication of statistics of building societies is being carried out. The operations of these NSW societies are included in these statistics for the purposes of comparability. The 'number of societies' shown in the following paragraph reflects the results of the amalgamations.

In 1977 a statistical collection was introduced covering the financial accounts of terminating building societies in all States and Territories of Australia. The statistics below summarise information collected from the 3,306 terminating building societies balancing within the 1981-82 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Terminating Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5633.0).

Information relating to the housing finance operations of terminating building societies is provided on pages 511-2.

TERMINATING BUILDING SOCIETIES: LIABILITIES AND ASSETS(*a*)

($ million)

Liabilities	*1981–82*	*Assets*	*1981–82*
Share capital(*b*)	1.2	Amount owing on loans(*b*)	1,519.2
Accumulated funds(*c*)	26.0	Cash on hand and current accounts at banks	11.8
Loans from:		Deposits with:	
Banks	257.6	Banks	6.8
Commonwealth/State Home Builders' Fund(*d*)	894.0	Others	20.2
Others	373.2	Physical assets	0.2
Other liabilities	8.2	Other assets	1.8
Total liabilities	**1,560.1**	**Total assets**	**1,560.1**

(*a*) At the balance dates of societies within the financial year shown. (*b*) Borrowing members' subscriptions have been offset against 'Amount owing on loans'. (*c*) Includes accumulated surpluses and deficits. (*d*) Refers to loans made through the Commonwealth/State Housing Agreements.

TERMINATING BUILDING SOCIETIES: INCOME AND EXPENDITURE

($ million)

Expenditure	*1981–82*	*Income*	*1981–82*
Interest paid on borrowing members' subscriptions	3.3	Interest on:	
Interest on loans from:		Loans to members	117.3
Banks	29.8	Other	1.8
Other	83.6	Management fees	11.2
Salaries and secretarial fees	10.2		
Other expenditure	4.0	Other income	2.9
Total expenditure	**130.9**	**Total income**	**133.3**

CREDIT UNIONS

A credit union (or co-operative credit society) is defined as an organisation that: (a) is registered under relevant State or Territory legislation; and (b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Credit union annual financial account statistics were first collected on a national basis from all registered credit unions for the year 1974–75 when there were 738 credit unions with a total of 909,547 members. The number of credit unions operating in 1981–82 was 590 with 1,733,490 members. Comprehensive financial account statistics are provided in the annual publication *Credit Unions: Assets, Liabilities, Income and Expenditure, Australia* (5618.0).

Statistics on the housing finance operations of credit unions are provided on pages 511-2, while on pages 503-4 are summary statistics on the financial operations, assets and selected liabilities of credit unions registered under the *Financial Corporations Act* 1974 which have assets in Australia exceeding $5 million.

CREDIT UNIONS: LIABILITIES AND ASSETS(*a*)

($ million)

Liabilities	*1981–82*	*Assets*	*1981–82*
Share capital and reserves:		Amount owing on loans(*c*)	2,324.4
Paid-up share capital	14.7	Cash on hand	13.7
Reserves		Deposits with	
Statutory	31.5	Banks	68.7
Other(*b*)	76.1	Credit Union Leagues or Associations	176.4
Deposits	2,704.4	Other	106.4
Loans	76.6	Bills, bonds and other securities	100.0
Accounts payable	16.6	Accounts receivable	16.1
Other liabilities	10.7	Physical assets	114.9
		Other assets	10.0
Total liabilities	**2,930.6**	**Total assets**	**2,930.6**

(*a*) At the balance dates of credit unions within the financial year shown. (*b*) Includes accumulated surpluses and deficits. (*c*) Net of unearned interest and allowance for doubtful debts.

CREDIT UNIONS: INCOME AND EXPENDITURE

($ million)

Expenditure	*1981–82*	*Income*	*1981–82*
Interest on:		Interest from:	
Deposits	256.5	Loans	360.9
Loans	7.0	Deposits	42.1
Wages and salaries	53.9		
Administrative expenses	40.0	Income from holdings of securities	11.1
Insurance premiums paid	7.3	Management fees	2.1
Allowance for doubtful debts	7.1	Bad debts recovered	1.2
Other expenditure	29.4	Other income	7.1
Total expenditure	**401.2**	**Total income**	**424.4**

SHORT-TERM MONEY MARKET

Authorised money market corporations

For some years prior to 1959 leading stockbrokers were actively engaged in operations which formed the basis of a short-term money market in Australia. The stockbrokers' operations involved the acceptance of short-term funds which were secured against government securities. These operations were severely limited by the lack of suitable short-term securities and by liquidity constraints. In February 1959 the Central Bank established the Official Short-Term Money Market by making available 'lender of last resort' facilities to selected dealers.

There are nine authorised money market dealers. They are required by the Reserve Bank to: (a) accept loans overnight, at call or for fixed periods, in minimum amounts of $50,000 and invest these funds in Commonwealth Government and other approved securities; (b) at all times be willing traders in the buying and selling of approved securities; (c) have a minimum paid-up capital of $400,000 and adhere to a maximum limit on the ratio of loans to shareholders' funds; and (d) consult regularly with the Reserve Bank on all market matters and furnish detailed information about their portfolios, operations, interest rates, balance sheets and profit and loss accounts. Under the 'lender of last resort' arrangements, dealers may borrow from the Reserve Bank for a minimum of seven days and at a rate designed to discourage excessive recourse to the facility.

The following table contains details of selected liabilities and assets, and interest rates. Additional information on authorised dealers collected under the *Financial Corporations Act* 1974 is provided on pages 503-4.

SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS

(*Source:* Reserve Bank of Australia)

	Liabilities to clients			*Asset holdings (face value)*			*Interest rates on loans accepted during month*				*Weighted average interest rate on loans outstanding (c)*
							At call		*For fixed periods*		
	All trading banks	*Other clients*	*Total*	*C'wealth Govt securities (a)*	*Commercial bills (b)*	*Banks' certificates of deposit*	*Minimum*	*Maximum*	*Minimum*	*Maximum*	
Month	*Average of weekly figures—($ million)*						*Per cent per annum*				
June -											
1978	191	1,089	1,279	1,144	154	16	0.50	18.86	3.00	11.50	9.05
1979	265	1,213	1,478	1,246	190	18	1.00	18.25	3.10	11.00	7.75
1980	384	1,114	1,498	1,274	229	58	1.00	18.80	5.50	13.00	10.34
1981	265	1,122	1,387	1,395	258	25	5.00	21.60	11.75	15.00	13.04
1982	336	1,038	1,374	1,047	265	85	1.00	26.10	4.00	19.25	14.88
1983	193	1,303	1,496	1,100	361	177	1.00	25.00	2.00	15.00	9.76

(*a*) Within 5 years of maturity. (*b*) Accepted or endorsed by banks. (*c*) Weighted average of rates paid on all days of the four or five weeks ending on the last Wednesday of the month.

Money market corporations

There are also companies without Reserve Bank 'lender of last resort' facilities which operate in a similar manner to authorised dealers. These companies are recognised under the *Financial Corporations Act* 1974 in the category of money market corporations. This category consists of registered corporations whose short-term borrowings are a substantial proportion of their total outstanding provision of finance, which is mainly in the form of loans to authorised dealers in the short-term money market and other liquidity placements, business loans and investments in Government, commercial and corporate paper.

The category of money market corporations also includes registered corporations providing short-term finance but which are themselves financed by related corporations with funds raised on a short-term basis, as well as corporations which borrow principally short-term and lend predominantly to related money market corporations.

Statistics on money market corporations registered under the *Financial Corporations Act* 1974 are contained in the tables on pages 503-4.

FINANCE COMPANIES

Information presented on finance companies in Australia in the following tables has been compiled from returns collected under the *Census and Statistics Act* 1905. For the purpose of these statistics, a finance company is defined as an incorporated company which is, or a group of incorporated companies related under Section 7 of the *Companies Act 1981*, each of which is, mainly engaged in providing to the general public (businesses as well as persons in their private capacity) any of the following types of credit facilities: instalment credit for retail sales; personal loans; wholesale finance; factoring; other consumer and commercial loans; finance leasing of business plant and equipment and bills of exchange transactions. A company is mainly engaged in providing these types of credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to such facilities, or if 50 per cent or more of its income is derived from such facilities.

The statistics for the financial year relate to those finance companies which have balances outstanding net of unmatured income in the prescribed types of credit facilities of $5 million or more in total on an Australia-wide basis. The 1981–82 annual census of finance companies indicated that companies thus included accounted for 98.9 per cent of the total net balances outstanding on prescribed credit facilities of all finance companies.

Comprehensive information on the transactions and financial structure of finance companies is available in the monthly publication *Finance Companies, Australia* (5614.0) and the annual publication *Finance Companies: Assets, Liabilities, Income and Expenditure, Australia* (5616.0) respectively. Information on foreign ownership and control of finance companies is given in Chapter 24, Overseas Transactions.

Although individual corporations in the *Financial Corporations Act* 1974 categories of finance companies and general financiers may meet the above definition of a finance company, differences in definitions, scope and coverage generally mean that the statistics on pages 503-4 for those categories are not comparable with the statistics for finance companies shown below.

FINANCE COMPANIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(*a*)

($ million)

	1979–80	*1980–81*	1981–82
Assets			
Balances outstanding on finance agreements(*b*)	15,264.5	17,479.1	20,559.9
Cash on hand and bank deposits	51.4	33.4	32.2
Loans to authorised money market dealers	12.3	12.5	19.4
Investments in shares and securities	252.1	314.1	354.0
Physical assets	179.5	182.2	205.3
Other assets	309.6	370.1	397.1
Total assets	**16,069.5**	**18,391.3**	**21,567.9**
Liabilities—			
Paid-up capital	1,051.7	1,145.3	1,303.6
Reserves	459.1	529.3	578.0
Unappropriated profits	327.2	385.0	550.5
Borrowed funds –			
Bank loans and overdrafts	261.3	315.5	419.6
Debentures	6,937.9	7,515.9	8,254.1
Secured and unsecured loans	5,577.9	6,802.0	8,663.0
Other liabilities	1,454.3	1,698.3	1,799.1
Total liabilities	**16,069.5**	**18,391.3**	**21,567.9**
Income for year –			
Interest from finance agreements	2,214.9	2,558.7	3,210.9
Other income	146.8	205.6	199.4
Total income	**2,361.7**	**2,764.2**	**3,410.3**
Expenditure for year			
Interest on borrowed funds	1,376.4	1,621.4	2,160.8
Wages, salaries and allowances, directors fees and emoluments	234.6	263.0	288.5
Other expenditure	485.2	507.6	538.6
Total expenditure	**2,096.3**	**2,392.0**	**2,987.9**

(*a*) At the balance date of companies within the financial year shown. (*b*) Excludes unmatured income of $3,604.3m in 1979–80, $4,306.8m in 1980–81 and $5,427.8m in 1981–82.

FINANCE COMPANIES: AMOUNT FINANCED AND BALANCES OUTSTANDING CLASSIFIED BY THE TYPE OF FINANCE AGREEMENT

($ million)

	1980–81	*1981–82*	*1982–83*
Amount financed during year—			
Instalment credit for retail sales and personal loans	2,519.0	2,732.9	2,585.9
Finance for housing	2,072.5	2,087.7	1,530.1
Wholesale finance	5,529.8	6,251.7	5,770.9
Factoring and other commercial loans	3,474.7	4,134.7	4,367.7
Leasing of business plant and equipment(*a*)	3,580.9	3,594.1	3,106.3
Bills of exchange(*b*)	888.8	2,093.3	2,606.3
Total amount financed on finance agreements(*c*)	**18,065.7**	**20,894.3**	**19,967.1**
Balances outstanding at 30 June (*d*)—			
Instalment credit for retail sales and personal loans	4,736.1	5,411.1	5,480.3
Finance for housing	4,000.5	4,844.3	4,525.6
Wholesale finance	1,329.8	1,495.4	1,264.4
Factoring and other commercial loans	4,526.7	5,482.9	6,033.1
Leasing of business plant and equipment(*e*)	8,351.9	9,622.1	9,783.6
Bills of exchange	104.7	134.1	179.8
Liquidity placements and loans to non-finance companies in group	613.3	588.1	808.0
Total balances outstanding on finance agreements	**23,663.0**	**27,578.0**	**28,074.8**

(*a*) Refers to the value of goods newly leased. (*b*) Refers to amounts paid for bills acquired. (*c*) Excludes amounts for liquidity placements and loans to non-finance companies in group. (*d*) Includes unmatured income. (*e*) Refers to the value of leasing agreements.

FINANCIAL CORPORATION STATISTICS

The statistics provided in the following tables have been compiled from monthly returns supplied to the Australian Bureau of Statistics by corporations registered under the *Financial Corporations Act* 1974 and which have Australia-wide assets exceeding $5 million. A summary of the objects and content of the Financial Corporations Act is given in Year Book No. 62, page 541. Information is also collected quarterly from registered corporations whose comparable asset figures exceed $1 million but not $5 million. Detailed statistics on all corporations registered under the Act are published in the monthly publication *Financial Corporations Statistics, Australia* (5617.0).

Descriptions of the categories *building societies, credit unions/co-operatives, authorised money market dealers* and *money market corporations* appear in the respective parts of this chapter. Descriptions of the other categories are as follows:

Pastoral finance companies—comprising corporations whose provision of finance is predominantly in the form of loans to rural producers largely associated with the provision of rural services.

Finance companies—comprising corporations not included in the categories *building societies, credit co-operatives, authorised money market dealers, money market corporations* or *pastoral finance companies* which rely substantially on borrowings in financial markets in Australia and/or from abroad and whose provision of finance is predominantly in the form of business and commercial lending, instalment credit to finance retail sales by others and/or other loans to individuals.

General financiers—comprising corporations which lend predominantly for business and commercial purposes, instalment credit to finance retail sales by others and/or other loans to individuals but which do not rely substantially on borrowings in financial markets in Australia and from abroad.

Intra group financiers—comprising corporations not elsewhere categorised which predominantly borrow within a corporation group and/or provide finance by lending within their corporation group or by investing in financial markets.

Other financial corporations—comprising registered corporations not included in any other specific category.

FINANCIAL CORPORATIONS WITH ASSETS IN AUSTRALIA EXCEEDING $5 MILLION: FINANCIAL OPERATIONS, SELECTED LIABILITIES AND ASSETS

($ million)

FINANCIAL OPERATIONS AND SELECTED LIABILITIES AS AT 30 JUNE 1983

		Financial operations			*Selected liabilities*		
			Borrowing lines and standby facilities available and unused from—(b)			*Borrowings from—*	
Category	*Number of corporations*	*Unused lending commitments(a)*	*Residents*	*Non-residents*	*Paid-up capital*	*Residents*	*Non-residents*
Building societies	65	394.2	434.6	–	(*c*)53.0	(*c*)14,358.1	10.2
Credit co-operatives	150	22.5	30.5	–	(*c*)	(*c*)2,968.7	
Authorised money market dealers	9	4.3	–	–	38.9	1,905.1	2.6
Money market corporations	55	3,299.6	601.4	1,625.4	332.2	12,158.5	574.9
Pastoral finance companies	15	–	122.4	119.7	275.0	989.5	56.9
Finance companies	104	1,293.3	1,119.4	564.1	1,705.0	21,535.9	432.4
General financiers	93	97.1	253.1	46.2	191.1	1,705.4	175.2
Intra group financiers	12	246.2	32.5	245.9	199.4	952.8	455.6
Other financial corporations	8	9.2	19.5	–	n.p.	362.7	n.p.
Total	**511**	**5,366.3**	**2,613.6**	**2,601.4**	(*d*)**2,794.6**	**56,936.8**	(*e*)**1,707.8**

For footnotes *see* end of table.

ASSETS IN AUSTRALIA AT 30 JUNE 1983

Category	*Cash and bank deposits*	*Loans to authorised dealers in the STMM and other short-term placements(f)*	*Government and public authority securities*	*Bills of exchange and promissory notes discounted and held(g)*	*Other financial investments*	*Other assets arising from the provision of finance (h)*	*All other assets in Australia*	*Total assets in Australia*	*Assets overseas*
Building societies	1,365.5	187.5	660.4	1,560.9	26.8	10,762.4	638.0	15,201.4	
Credit co-operatives	149.0	379.9	36.0	38.8	20.4	2,364.3	168.9	3,156.9	
Authorised money market dealers	180.5	1.0	1,436.3	376.5	–	0.5	11.9	2,006.6	
Money market corporations	708.3	2,548.4	255.6	3,746.3	386.8	5,702.0	322.6	13,670.1	57.2
Pastoral finance companies	4.9	16.3		–	467.8	867.4	529.5	1,885.7	2.9
Finance companies	34.4	518.1	5.9	148.4	927.4	24,046.9	274.8	25,956.0	4.2
General financiers	26.5	89.5	4.4	94.2	106.3	1,984.3	350.4	2,655.6	1.0
Intra group financiers	1.3	142.4	0.4	216.6	111.9	1,182.8	29.1	1,684.4	12.1
Other financial corporations	61.0	141.7	(*i*)	91.1	(*i*)	29.7	(*j*)51.5	375.1	
Total	**2,531.0**	**4,024.7**	**2,398.9**	**6,272.7**	**2,047.4**	**46,940.3**	**(*j*)2,376.8**	**66,591.7**	**77.5**

(*a*) Includes all binding commitments to provide funds to residents of Australia other than those that are of a type which is usually completely disbursed within 30 days of approval; excludes commitments that do not have a quantifiable limit. (*b*) Includes all binding commitments (i.e. borrowing lines and standby facilities) to provide funds to reporting corporations; excludes standby facilities which do not have a quantifiable limit. (*c*) 'Paid-up capital' includes only fixed share capital; withdrawable share capital is included in 'Borrowings from residents'. (*d*) Excludes paid-up capital of other financial corporations. (*e*) Excludes borrowings of other financial corporations. (*f*) Includes short-term placements that are repayable at call or within 90 days; excludes funds placed with banks and related corporations, and purchases of government securities and bills of exchange. (*g*) Excludes bills that have been drawn or accepted by reporting corporations. (*h*) Includes holdings of bills that have been drawn by reporting corporations and loans that have been re-financed by the sale of bills accepted by reporting corporations. (*i*) Not available separately, included in 'All other assets in Australia'. (*j*) Includes items not available for separate publication.

CASH MANAGEMENT TRUSTS

A monthly statistical collection was introduced in May 1983 to obtain information on the operations of cash management trusts. A cash management trust is a unit trust which is established and governed by a trust deed, is open to the public and is restricted to investing in financial securities maturable or redeemable within 12 months.

Since the launching of the first cash management trust in December 1980, the trusts have experienced rapid growth. They now hold a significant place in the Australian financial system, allowing small investors to take advantage of the high yields often available in the short term money market. Previously such opportunities had been available only to large-scale investors such as major corporations, public authorities and superannuation funds.

The following table summarises the financial operations of cash management trusts.

CASH MANAGEMENT TRUSTS

Quarter	*Units in issue at end of period $ million*	*Weighted average net yield at end of period % per annum*	*Assets ($ million)*					
			Cash and deposits with banks	*All other deposits and loans*	*Bills of exchange purchased and held*	*Promisory Notes purchased and held*	*Other assets*	*Total assets*
1982-83								
September	2,169.1	15.95	n.a.	n.a.	n.a.	n.a.	n.a.	2,229.5
December	2,170.4	13.37	n.a.	n.a.	n.a.	n.a.	n.a.	2,219.6
March	2,163.0	13.48	568.8	617.1	833.2	171.1	31.5	2,221.7
June	2,152.6	13.04	340.5	615.6	1 038.8	184.2	34.7	2,213.8
1983-84								
September	2,121.1	11.40	63.3	803.5	978.4	215.0	96.0	2,156.2

LIFE INSURANCE

Statistics in the following tables have been derived from the publications of the Life Insurance Commissioner and relate to the life insurance business of companies with head offices in Australia and the Australian business of companies with head offices overseas. Also included are the life business operations voluntarily reported by three State Government Insurance Offices.

Forty-four life offices conducted life insurance business in Australia during 1982.

Information contained in the following two tables does not relate to uniform accounting periods but to the balance dates of organisations falling within the calendar year shown.

LIFE INSURANCE OFFICES: LIABILITIES AND ASSETS
($ million)

	1980	*1981*	*1982*
Liabilities—Australia and overseas—			
Total balances of revenue accounts at end of year	17,516.4	19,161.4	21,563.5
Reserves	193.7	222.4	269.4
Total	17,710.1	19,383.8	21,832.9
Other liabilities—			
Bank overdraft	93.9	164.9	153.2
Deposits	115.0	147.7	117.5
Claims admitted	132.5	134.7	144.8
Sundry creditors	147.0	166.7	153.4
Provision for taxation	292.0	329.1	388.6
Provision for superannuation and long-service leave	34.6	41.2	49.2
Miscellaneous liabilities	40.0	25.6	237.1
Total liabilities	**18,565.2**	**20,393.8**	**23,076.7**
Assets—Australia and overseas—			
Property and fixed assets	4,265.5	4,740.9	5,386.5
Loans	2,427.3	2,566.5	3,054.3
Investment	11,071.1	11,985.7	13,587.8
Cash and deposits	170.4	386.7	284.8
Outstanding premiums including advances of premiums	287.6	310.1	327.1
Outstanding interest, dividends and rents	259.4	281.5	332.1
Sundry debtors	54.6	90.2	71.5
Miscellaneous assets	29.3	32.3	32.6
Total assets	**18,565.2**	**20,393.8**	**23,076.7**

LIFE INSURANCE OFFICES: REVENUE AND EXPENDITURE

($ million)

	1980	*1981*	*1982*
Balance of Revenue Account at beginning of year—Australia and overseas	*15,567.0*	*17,516.4*	*19,161.4*
Revenue—			
Single premiums	167.5	389.2	320.3
Other premiums	2,434.1	2,684.1	3,049.1
Net interest	1,302.1	1,515.5	1,782.7
Net conversion and transfer values-in	54.5	0.8	13.8
Net transfers from reserves and provisions within fund	-28.4	-27.5	-45.0
Other net transfers within statutory fund-in	-	-0.2	-
Net profit (or loss) on realisation or revaluation of assets	579.6	269.2	433.6
Miscellaneous income	-110.0	-460.4	92.7
Total revenue	**4,399.4**	**4,370.9**	**5,647.3**
Total	**19,966.4**	**21,887.3**	**24,808.7**
Expenditure			
Claims by death and disability	371.0	392.2	472.6
Claims by maturity	535.0	577.6	711.4
Surrenders and bonuses in cash	856.0	952.7	1,175.5
Annuities	12.2	12.5	14.8
Commissions	246.6	299.9	352.1
Salaries	198.3	221.1	256.4
Contribution to staff superannuation	39.8	43.5	50.8
Taxes (other than those charged on interest dividends and rents)	25.1	31.5	25.3
Other expenses	154.9	176.1	220.9
Transfer out of statutory fund	11.0	18.8	-34.6
Total expenditure	**2,449.9**	**2,725.9**	**3,245.2**
Balance of Revenue Account at end of year—Australia and overseas	*17,516.5*	*19,161.4*	*21,563.5*
Total	**19,966.4**	**21,887.3**	**24,808.7**

LIFE INSURANCE: SUMMARY

	Insurance and endowment policies			
	Number of policies	*Sum insured ($ million)*	*Business issued by single premiums ($ million)*	*Annual premiums ($ million)*
ORDINARY AND INDUSTRIAL BUSINESS				
New policies issued—				
1981	398,015	13,604.5	116.8	131.7
1982	412,298	15,454.0	115.3	144.1
Policies discontinued or reduced(*a*)—				
1981	718,626	9,162.6	..	118.1
1982	733,757	9,973.6	..	126.8
Policies existing at end of—				
1981	6,441,083	76,047.0	..	953.0
1982	6,119,624	81,526.9	..	970.2
SUPERANNUATION BUSINESS				
New policies issued—				
1981	196,092	22,035.9	128.3	440.4
1982	190,961	24,113.5	196.0	493.2
Policies discontinued or reduced(*a*)—				
1981	84,557	7,276.4	..	158.8
1982	86,250	10,046.0	..	220.0
Policies existing at end of—				
1981	892,782	63,859.3	..	1,390.8
1982	997,491	77,926.7	..	1,663.9

(*a*) Includes net transfers and conversions off.

GENERAL INSURANCE

The following statistics have been compiled from returns collected under the *Census and Statistics Act* 1905 and relate to the operations of:

(*a*) *Bodies corporate* authorised to carry on insurance business under the *Insurance Act* 1973 (*see* page 491);

(*b*) *Brokers* in respect of business placed with overseas insurers; and

(*c*) *Government instrumentalities*, i.e. State Government Insurance Offices and Commonwealth Government and State Government instrumentalities in respect of their general insurance business.

These statistics are based on the following definitions:

Premiums comprise the full amount receivable in respect of direct insurance and facultative reinsurance business written or renewed within Australia (including business placed overseas by Australian brokers) during the year less (a) outward facultative reinsurance within Australia, (b) stamp duty and fire service charges paid, and (c) returns, rebates and bonuses paid or credited to policy holders. Premiums are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from 'earned premium income' appropriate to the year.

Claims comprise, for direct insurance and facultative reinsurance business, payments made during the year plus the estimated amount of outstanding claims at the end of the year less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.

In many instances brokers have no knowledge of claims made by the insured on overseas insurers in respect of business placed through them. Because of this, no details of claims are collected from brokers.

Information contained in the following tables does not relate to uniform accounting periods but to the financial years of the organisations which ended during the years shown.

More detailed descriptions and dissections of these statistics may be found in the annual publication *General Insurance, Australia* (5620.0).

GENERAL INSURANCE: PREMIUMS AND CLAIMS BY PRINCIPAL CLASS OF BUSINESS

($ million)

Class of business	*1979–80*	*1980–81*	*1981–82*
PREMIUMS(*a*)			
Fire(*b*)	287.3	305.9	352.8
House Owners' and House-holders'	315.8	379.6	459.8
Contractors' All Risks	21.1	26.8	39.1
Marine and Aviation	116.5	134.0	139.7
Motor Vehicle Comprehensive	863.8	914.6	1,042.2
Compulsory Third Party (Motor Vehicle)	674.5	768.4	910.4
Employers Liability(*c*)	774.4	875.7	1,175.8
Public Liability(*d*)	111.0	134.4	170.7
All other	345.3	384.3	430.8
Total	**3,509.8**	**3,923.7**	**4,721.3**
CLAIMS(*e*)			
Fire(*b*)	218.9	245.7	262.7
House Owners' and House-holders'	217.3	267.8	273.9
Contractors' All Risks	13.0	18.8	30.4
Marine and Aviation	69.3	84.0	105.8
Motor Vehicle Comprehensive	650.7	740.2	861.4
Compulsory Third Party (Motor Vehicle)	673.1	850.5	1,107.9
Employers Liability(*c*)	698.2	922.4	1,324.8
Public Liability(*d*)	54.7	78.3	107.8
All other	166.5	201.7	215.5
Total	**2,761.6**	**3,409.4**	**4,290.1**

(*a*) Includes premiums received by brokers 1979–80, $86.4 million; 1980–81, $89.1 million; 1981–82, $94.7 million. (*b*) Includes sprinkler leakage, loss of profits, and crop and hailstone insurance. (*c*) Excludes workers' compensation insurance in the coal mining industry in N.S.W. (*d*) Includes product liability and professional indemnity insurance. (*e*) Excludes brokers.

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES

Public authority pension and superannuation schemes are established primarily to provide financial benefits on retirement to employees of Australian and State governments, local governments and statutory authorities created by governments.

In the public sector there are three types of schemes in operation:

(a) Self-administered superannuation funds;
(b) Schemes operated through life insurance offices; and
(c) Schemes funded from Consolidated Revenue.

Schemes of types (a) and (b) are included in the statistics below while type (c) schemes are not separately constituted funds and are therefore excluded. In addition schemes of some Australian Government trading enterprises are excluded. More detailed descriptions and dissections of these statistics may be found in the annual publication *Public Authority Pension and Superannuation Schemes, Australia* (5511.0)

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH SELF-ADMINISTERED FUNDS

	1979–80	*1980–81*	*1981–82*
($ million)			
Income			
Contributions—			
Employees	422.4	501.1	580.9
Employing authorities	768.6	893.4	1,040.3
Interest, dividends and rent	503.9	573.2	696.6
Transfers Other income	57.4	71.5	259.4
Total income	**1,752.3**	**2,039.2**	**2,577.2**
Expenditure			
Pensions	471.1	547.1	628.4
Lump sum payments—			
On retirement, death, resignation or dismissal (*a*)	392.2	465.4	550.1
Gratuities	10.0	8.8	11.6
Other expenditure	79.6	86.9	193.9
Total expenditure	**952.9**	**1,108.2**	**1,384.0**
Assets at end of year—			
Cash—			
Deposits with Treasury	653.5	814.0	965.5
Other deposits and cash	64.9	96.2	162.4
Commonwealth Government securities	45.6	50.1	74.6
Local and semi-government securities	1,589.1	1,734.9	2,056.3
Mortgages	722.0	927.9	1,074.7
Loans to building societies	214.4	235.7	261.7
Company shares, debentures and notes	491.5	630.2	838.9
Other assets	1,314.2	1,675.7	2,036.5
Total assets *(b)*	5,095.1	6,164.8	7,470.6
Less Sundry creditors, etc.	100.5	104.1	140.9
Accumulated funds *(b)*	**4,994.5**	**6,060.7**	**7,329.7**
Contributors at end of year	613,907	627,401	644,693
Pensioners at end of year—			
Ex-employees	76,122	78,667	85,022
Widows	39,647	40,089	40,294
Children	3,953	3,712	3,730

(*a*) Includes refunds of contributions to continuing members. (*b*) Includes assets of the Voluntary Savings Scheme of the State Superannuation Fund in South Australia.

PUBLIC AUTHORITY PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES

		1979–80	*1980–81*	*1981–82*
Income—				
Contributions—				
Employees	$ million	71.4	70.8	68.6
Employing authorities	$ million			
Contributors at end of year	No.	43,497	41,701	33,614

AUSTRALIAN INDUSTRY DEVELOPMENT CORPORATION

The Australian Industry Development Corporation (AIDC) was established by the *Australian Industry Development Corporation Act* 1970 and commenced operations on 1 February 1971. Within the objectives and broad policy guidelines defined in the Act, the Corporation operates as an independent commercial enterprise governed by its own Board of Directors.

The Corporation has a capital of $100 million, to be subscribed by the Commonwealth Government in instalments but the whole being available if required to meet obligations. The paid-up capital at 30 June 1982 was $62.5 million.

The central objectives of the Corporation are to promote the development of industries in Australia and support local participation in the ownership and control of industries and resources. Consistent with these objectives and the principle that AIDC must operate on a commercial basis and assist only in ventures which can demonstrate sound prospects, the Corporation provides finance, obtained by borrowing both in Australia and overseas, for Australian firms (including local firms with foreign partners) engaged in industries concerned with the manufacture, processing, treatment, transportation or distribution of goods, or the development or use of natural resources (including the recovery of minerals), or technology and activities that are connected with or incidental to those industries.

The Corporation's financial participation in a venture is governed by the prevailing terms and conditions under which it can itself obtain loan finance. The capital of the Corporation is provided as a base for its borrowings and is not directly used for assistance to industry projects.

The AIDC provides development capital both for start-up situations and for going concerns. Although the greater part of its financing is by loans, it also makes equity investments in industry. Where a company's capital needs can best be met by loan finance, AIDC does not seek an equity position. It aims to avoid involvement in the management of companies to which it provides financing.

Financing commitments approved since operations commenced, totalled $1,084 million at 30 June 1982, and operational loans and investments outstanding were $606 million.

INSTALMENT CREDIT FOR RETAIL SALES

Information relating to instalment credit for retail sales in Australia is given in the following tables. More detailed information may be found in the monthly publication *Instalment Credit for Retail Sales, Australia* (5631.0).

These statistics cover the operations of instalment credit schemes which relate primarily to the financing of retail sales of consumer commodities. In general, the term instalment credit is defined as relating to schemes in which repayment is made by regular predetermined instalments (predetermined by amount or by percentage of amount financed or balance outstanding). Types of instalment credit schemes covered include hire purchase, time payment, budget accounts and personal loans where these schemes relate to the financing of retail sales of consumer commodities.

Figures for amounts financed exclude interest, hiring charges, insurance, etc. Figures for balances outstanding and collections include interest, hiring charges, insurance, etc.

INSTALMENT CREDIT FOR RETAIL SALES BY TYPE OF BUSINESS: AMOUNT FINANCED BY COMMODITY GROUP, COLLECTIONS AND BALANCES OUTSTANDING, AUSTRALIA

($ million)

	Amount financed during year					*Collections and other liquidations of balances during year*	*Balances outstanding at end of year*
	Motor cars and station wagons		*Other motor vehicles (a)*	*Household and personal goods*	*Total*		
	New	*Used*					
Finance companies							
1980-81	407.1	620.0	162.1	373.1	1,562.2	2,181.6	3,054.7
1981-82	501.0	706.7	179.0	397.0	1,783.7	2,333.2	3,544.4
1982-83	482.2	656.7	185.6	398.2	1,722.6	2,606.6	3,673.2
Other businesses(*b*)—							
1980-81	—	0.1	0.4	228.2	228.7	240.0	147.2
1981-82	—	0.1	0.4	247.8	248.3	257.6	161.3
1982-83	—	—	0.4	256.2	256.6	271.1	167.3
Total all businesses—							
1980–81	**407.1**	**620.1**	**162.4**	**601.4**	**1,790.9**	**2,421.6**	**3,201.9**
1981–82	**501.0**	**706.8**	**179.4**	**644.8**	**2,032.0**	**2,590.8**	**3,705.8**
1982–83	**482.2**	**656.7**	**186.0**	**654.4**	**1,979.3**	**2,877.7**	**3,840.5**

(*a*) Includes new and used motor cycles, boats, caravans, trailers and motor parts and accessories but excludes panel vans, utilities, trucks, tractors and other vehicles normally used for commercial purposes. (*b*) Businesses operating retail establishments, unincorporated finance businesses and businesses other than wholesalers and manufacturers.

INSTALMENT CREDIT FOR RETAIL SALES BY TYPE OF CREDIT: AMOUNT FINANCED BY COMMODITY GROUP, AUSTRALIA

($ million)

	Motor cars and station wagons		*Other motor vehicles (a)*	*Household and personal goods*	*Total*
	New	*Used*			
Hire purchase					
1980-81	315.6	467.1	120.8	183.6	1,087.1
1981-82	394.0	538.0	139.4	180.4	1,251.8
1982-83	377.3	506.7	148.1	141.9	1,174.0
Other instalment credit					
1980-81	91.5	153.0	41.7	417.8	703.9
1981-82	107.0	168.8	40.0	464.4	780.2
1982-83	104.9	150.0	37.9	512.5	805.3
Total instalment credit—					
1980–81	**407.1**	**620.1**	**162.4**	**601.4**	**1,790.9**
1981–82	**501.0**	**706.8**	**179.4**	**644.8**	**2,032.0**
1982–83	**482.2**	**656.7**	**186.0**	**654.4**	**1,979.3**

(*a*) Includes new and used motor cycles, boats, caravans, trailers and motor parts and accessories but excludes panel vans, utilities, trucks, tractors and other vehicles normally used for commercial purposes.

HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and loans secured by contracts of sale) approved by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. A lender is significant if over a financial year it approves loans to individuals for housing finance for owner occupation in excess of $250,000 or if at the end of a financial year it has balances outstanding on such loans exceeding $2 million.

The types of lenders considered in these statistics are trading and savings banks, permanent and terminating building societies, finance companies, government housing authorities and other government departments, insurance companies and credit unions.

The following tables provide information classified by type of lender and the use for which approved housing loans are intended (e.g. construction or purchase).

Purchase of newly erected dwellings represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

Purchase of established dwellings represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of *other dwellings* are flats, home units, semi-detached cottages, villa units, town houses, etc.).

The term *number of dwelling units* refers to the number of houses and other dwellings for which loans secured by contract of sale or first mortgage only have been approved.

Comprehensive statistics on housing finance for owner occupation are available in the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

The following table summarises the housing finance operations of the significant lenders.

HOUSING FINANCE FOR OWNER OCCUPATION

($ million)

	Loans approved for—				
	Construction or purchase of dwellings	*Alterations and additions*	*Cancellations of loans previously approved*	*Loans advanced(a)*	*Loans approved but not advanced(a)*
1980 81	7,470.8	501.8	394.1	6,461.8	1,166.2
1981 82	6,506.1	524.2	312.8	5,686.6	1,031.4
1982 83	7,171.0	510.1	292.8	6,083.6	1,311.0

(*a*) Excludes Trading Banks; data not available.

HOUSING FINANCE FOR OWNER OCCUPATION: NUMBER OF DWELLING UNITS AND VALUE OF LOANS APPROVED TO INDIVIDUALS BY TYPE OF LENDER

	Banks		*Building societies*					
	Savings	*Trading*	*Permanent*	*Terminating*	*Finance companies*	*Government*	*Credit unions and insurance companies*	*Total*
CONSTRUCTION OF DWELLINGS								
			(Number)					
1980 81	21,358	8,613	9,873	1,442	1,462	1,968	1,405	46,121
1981 82	18,963	6,896	7,130	924	930	2,774	1,224	38,841
1982 83	20,382	5,045	6,953	953	843	2,844	1,231	38,251
			($ million)					
1980 81	523.7	181.1	329.7	40.9	50.4	52.0	36.6	1,214.5
1981 82	486.6	154.4	256.2	28.5	36.8	75.1	31.4	1,068.9
1982 83	576.2	121.4	262.1	32.1	38.6	84.5	31.0	1,145.9
PURCHASE OF NEWLY ERECTED DWELLINGS								
			(Number)					
1980 81	9,292	4,004	8,968	1,306	1,705	3,185	947	29,407
1981 82	8,249	3,603	5,572	1,025	1,243	2,640	768	23,100
1982 83	7,928	2,555	3,924	1,039	743	2,302	579	19,070
			($ million)					
1980 81	238.0	80.0	306.2	37.6	75.0	84.6	27.5	848.8
1981 82	227.9	79.6	215.0	31.7	66.2	74.6	24.4	719.3
1982 83	242.2	61.4	157.1	35.8	40.7	74.3	17.5	629.0
PURCHASE OF ESTABLISHED DWELLINGS								
			(Number)					
1980 81	79,197	32,642	55,113	2,897	10,991	7,736	7,592	196,168
1981 82	74,771	30,202	38,729	2,229	6,179	7,823	7,098	167,031
1982 83	94,088	24,292	37,079	2,944	3,844	7,640	7,039	176,926
			($ million)					
1980 81	1,959.3	691.8	1,779.1	82.3	467.6	199.8	227.5	5,407.5
1981 82	1,934.6	650.3	1,337.8	70.1	288.7	219.4	217.0	4,717.9
1982 83	2,693.2	609.4	1,371.0	100.4	176.1	228.9	217.2	5,396.2
TOTAL								
			(Number)					
1980 81	109,847	45,259	73,954	5,645	14,158	12,889	9,944	271,696
1981 82	101,983	40,701	51,431	4,178	8,352	13,237	9,090	228,972
1982 83	122,398	31,892	47,956	4,936	5,430	12,786	8,849	234,247
			($ million)					
1980 81	2,721.1	952.9	2,415.1	160.8	593.0	336.4	291.6	7,470.8
1981 82	2,649.1	884.3	1,809.0	130.2	391.6	369.1	272.8	6,506.1
1982 83	3,511.6	792.2	1,790.2	168.4	255.4	387.7	265.7	7,171.0

NEW CAPITAL RAISINGS BY COMPANIES LISTED ON AUSTRALIAN STOCK EXCHANGES

Information relating to capital raised by companies listed on Australian Stock Exchanges is given in the following tables.

These statistics cover capital raised through share and debenture subscriptions and by way of deposits, unsecured notes and loans secured over the entire assets of the company. The following funds are excluded from the collection: (a) all capital raised from Australian banks (other than direct equity investment), i.e. overdrafts, mortgage loans, term loans or debentures; (b) temporary advances or short-term deposits from any source; and (c) complete or partial issues by Australian companies on overseas markets taken up through overseas brokers.

Listed companies are companies incorporated in Australia whose shares, debentures or other securities are listed on one or more of the Australian Stock Exchanges. For such companies new capital includes: (a) all issues of ordinary shares if any ordinary shares are listed; (b) all issues of preference shares if any preference shares are listed; and (c) all issues of debentures, unsecured notes, secured and unsecured loans and deposits if any shares or other securities are listed.

The following notes relate to specific items in the tables:

New money

This is the net amount of cash transferred from the 'investing public' to the 'company sector'. For this purpose the *investing public* is defined to include all non-company subscribers, Australian life insurance companies, Commonwealth Government and private superannuation funds and banks. In practice, it is necessary to include in *new money* most subscriptions by companies holding less than 5 per cent of the ordinary shares of an issuing company as it is not practicable to separately identify all such subscriptions. However, where large subscriptions by companies holding less than 5 per cent of the ordinary shares in the issuing company are identified they are not included in *new money*. Subscriptions by Australian life insurance companies and Commonwealth Government and private superannuation funds are included in *new money* irrespective of their holdings of ordinary shares in the issuing company.

Amount not involving new money

This amount includes cash subscriptions received by issuing companies from associated companies. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc. in associated and subsidiary companies, and therefore do not represent a net transfer of cash from the 'investing public' to the companies. In the tables which follow, the *amount not involving new money* is obtained by deducting the amount of *new money*, from the total capital raised.

LISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUES OF SHARES(*a*) AND THROUGH DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS

($ million)

	Share capital						*Debentures, unsecured notes, etc.*		
	Total amount of issues commenced			*Cash raised during period*					
	Total amount including premiums etc.	*Type of consideration*							
		Other than cash(b)	*Cash*	*Total(c)*	*Amount not involving new money*	*New money*	*Total amount raised (d)*	*Amount not involving new money (d)*	*New money*
Year ended June—									
1978 . . .	793.3	295.1	498.0	539.3	189.7	349.6	6,734.8	5,615.7	1,119.3
1979 . . .	919.5	372.9	546.5	513.1	183.0	330.2	7,532.1	6,653.7	878.4
1980 . . .	2,211.9	824.6	1,387.3	1,336.7	255.1	1,081.6	9,378.0	7,924.6	1,453.4
1981 . . .	4,171.0	1,642.2	2,528.8	2,625.7	479.0	2,146.8	12,682.5	11,066.1	1,616.4
1982 . . .	2,269.6	890.1	1,379.4	1,593.7	290.2	1,303.4	15,453.2	13,639.8	1,813.5
1983 . . .	1,208.1	299.2	908.9	1,013.5	269.5	744.0	13,805.0	13,219.0	586.1

(*a*) Includes share subscriptions by overseas investors to issues in Australia. (*b*) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (*c*) Includes calls on issues commenced in earlier years. (*d*) Includes conversions, renewals, etc.

LISTED COMPANIES: NEW MONEY RAISED IN SHARES AND DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS—INDUSTRY GROUPS (a)

($ million)

	Manufacturing	*Finance, Property and Business Services*	*Wholesale and Retail Trade*	*Mining*	*Other*	*All industries*
SHARES						
Year ended June—						
1978	142.3	100.9	41.9	43.1	21.4	349.6
1979	95.8	74.3	9.9	122.4	27.8	330.2
1980	419.9	119.8	55.2	396.1	90.7	1,081.6
1981	892.3	119.8	130.9	905.6	98.2	2,146.8
1982	383.3	74.1	129.9	566.1	150.1	1,303.4
1983	319.7	74.1	95.0	170.1	85.1	744.0
DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS						
Year ended June—						
1978	134.6	907.3	50.5	(*b*)—19.6	46.2	1,119.3
1979	302.5	605.9	8.2	(*b*)—57.8	19.4	878.4
1980	409.9	887.7	86.3	15.6	53.9	1,453.4
1981	337.4	1,145.3	57.1	5.8	70.6	1,616.4
1982	211.6	1,443.0	117.0	(*b*)—44.4	86.3	1,813.5
1983	18.8	491.4	(*b*)—12.5	5.7	82.6	586.1
TOTAL NEW MONEY RAISED						
Year ended June—						
1978	276.9	1,008.2	92.4	23.5	67.6	1,468.9
1979	398.3	680.2	18.1	64.6	47.2	1,208.6
1980	829.8	1,007.5	141.5	411.7	144.6	2,535.0
1981	1,229.7	1,265.1	188.0	911.4	168.8	3,763.2
1982	594.9	1,517.1	246.8	521.7	236.4	3,116.9
1983	338.5	565.5	82.5	175.8	167.7	1,330.1

(*a*) Until 1981 companies were classified in accordance with the Population Census Classification of Industries (Revised 1966) and from 1982 in accordance with the Australian Standard Industrial Classification (ASIC). (*b*) Excess of repayments over receipts.

BIBLIOGRAPHY

ABS publications

Monthly summary of statistics, Australia (1304.0)
Savings banks, Australia (monthly) (5602.0)
Major trading banks, Australia (monthly) (5603.0)
Banking, Australia (quarterly) 5605.0)
Housing finance for owner occupation, savings banks and trading banks, Australia (monthly) (5608.0)
Housing finance for owner occupation, Australia (monthly) (5609.0)
Housing finance for owner occupation, permanent building societies, Australia (monthly) (5610.0)
Finance companies, Australia (monthly) (5614.0)
Finance companies: assets, liabilities, income and expenditure, Australia (annual) (5616.0)
Financial corporations statistics, Australia (monthly) (5617.0)
Credit unions: assets, liabilities, income and expenditure, Australia (annual) (5618.0)
General insurance, Australia (annual) (5620.0)
New capital raisings by companies listed on Australian stock exchanges (quarterly) (5628.0)
Instalment credit for retail sales, Australia (monthly) (5631.0)
Permanent building societies: assets, liabilities, income and expenditure, Australia (annual) (5632.0)
Terminating building societies: assets, liabilities, income and expenditure, Australia (annual) (5633.0)
Cash management trusts, Australia (monthly) (5635.0)

CHAPTER 22

PUBLIC FINANCE

This chapter deals with the financial activities of the organisations which make up the three levels of government in the Australian political system—Commonwealth, State and Local—and which collectively constitute the public sector. An account is given of the activities of each level of government, with particular emphasis being given to Commonwealth authorities. Tables are then presented which bring together the transactions of all public authorities to highlight the role in the Australian economy of the public sector as a whole. Then follows a section on government borrowing activities at all levels.

COMMONWEALTH GOVERNMENT FINANCE

Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth of Australia are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 16–19).

Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51. Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments.

Sections 87 and 96 of the Constitution deal with the financial relations between the Commonwealth and the States. The full text of the Financial Agreement of 1927 was given in Year Book No. 31, page 21; accounts of this Agreement as affected by subsequent Agreements were included in later issues of the Year Book up to No. 37 (*see* pages 685–90); details of the main provisions appeared in further issues of the Year Book up to No. 50 (*see* pages 952–3); and details of current provisions for financial assistance to the States are given on pages 526-532 of this Year Book.

The *Audit Act* 1901 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth Government finances is the responsibility of the Commonwealth Minister for Finance.

Commonwealth Government Budget

The Commonwealth Government Budget records the transactions of those authorities of the Commonwealth Government whose receipts and payments are summarised in the statements of Public Account balances. In 1982–83 the change in cash balances was represented by the following –

	$'000
Cash receipts of the Consolidated Revenue Fund	44,476,421
plus cash receipts of Loan Fund	32,818,459
plus cash receipts of Trust Fund	16,995,765
Total	*94,290,645*
less cash payments from Consolidated Revenue Fund	44,476,421
less cash payments from Loan Fund	32,846,505
less cash payments from Trust Fund (including decrease in investments of the Trust Fund)	16,615,161
Total	*93,938,087*
equals increase in cash balances	352,558

Revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, social services, payments to the States and general administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth Government at some future time. The Loan Fund receives its funds from the sale of Commonwealth Government securities, and the expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States by way of distribution of the proceeds of loans raised by the Commonwealth Government on their behalf and by capital assistance grants, the remaining disbursements being mainly for Commonwealth Government purposes.

The estimated receipts and outlay of the Budget for 1983–84 are set out in the table which follows, together with figures for the years 1978–79 to 1982–83. The national accounting presentation of the Budget is shown in order to be consistent with other transactions figures given in this chapter.

OUTLAYS AND RECEIPTS OF THE COMMONWEALTH BUDGET

($ million)

(*Source:* Budget Paper No. 1 *Budget Statements 1983-84*)

	1978–79	*1979–80*	*1980–81*	*1981–82*	*1982–83*	*1983–84 Budget Estimates*
Outlay						
Net expenditure on goods and services—						
Current	5,560	6,134	7,265	8,527	9,836	11,346
Capital(*a*)	298	290	438	432	605	677
Total	5,857	6,423	7,703	8,959	10,441	12,023
Transfer payments—						
Personal benefit payments	9,096	9,898	11,213	13,067	15,910	19,046
Unfunded employee retirement benefits	162	181	207	252	292	320
Grants to States and local government authorities	9,349	10,302	11,514	12,642	14,726	16,929
Grants to the Northern Territory	290	361	469	539	635	753
Interest paid	1,971	2,223	2,561	2,881	3,378	4,133
Transfers overseas	477	520	575	667	735	797
Subsidies	445	595	756	866	917	950
Grants for private capital purposes	116	165	137	204	244	233
Purchase of existing assets	22	20	16	25	45	35
Total	21,928	24,264	27,449	31,144	36,881	43,198
Total expenditure	27,785	30,687	35,152	40,103	47,322	55,221
Net advances—						
States	1,129	817	853	782	969	940
Northern Territory	-2	79	83	80	83	88
Commonwealth authorities	66	110	179	344	611	338
Other sectors	37	−32	22	28	−3	118
Total	1,230	974	1,138	1,235	1,660	1,483
Total outlay	*29,015*	*31,661*	*36,290*	*41,338*	*48,982*	*56,704*
Receipts—						
Taxation–						
Indirect taxes	7,072	8,459	9,820	11,004	12,398	14,006
Income tax on companies	3,151	3,547	4,856	5,258	5,108	4,827
Income tax on persons	12,804	15,040	17,543	21,224	22,967	24,773
Estate and gift duties	83	49	17	4	2	4
Tax on Certain Bank Transactions	–	–	–	–	30	200
Other taxes, fees, fines, etc.	74	92	99	137	150	171
Unfunded employee retirement contributions	63	67	73	86	90	101
A.C.T. Taxes and charges	50	53	61	72	91	99
Less remissions	8	1	1	2	1	. .
Total	23,288	27,305	32,467	37,784	40,835	44,181
Other receipts—						
Interest, rent and dividends	1,946	2,033	2,280	2,585	2,922	3,347
Gross income of public enterprises	300	265	240	385	700	701
Net sales of existing assets(*b*)	24	24	195	36	54	113
Total	2,270	2,322	2,715	3,006	3,676	4,161
Total receipts	*25,558*	*29,627*	*35,182*	*40,790*	*44,509*	*48,342*
Deficit	**3,457**	**2,034**	**1,109**	**548**	**4,473**	**8,361**

(*a*) Expenditure on new fixed assets *plus* increase in stocks *less* sales of previously rented houses. (*b*) Excludes sales of previously rented houses.

It should be noted that some transactions undertaken by authorities covered by the Budget are not reflected in the change in cash balances, usually because they are not cash transactions or because a receipt and a payment are offset against each other so that only a net amount is included in published totals. The national accounting presentation of the Budget includes these additional transactions, further details of which may be found in Budget Paper No. 1, *Budget Statements 1983–84.*

Financing of the Commonwealth Government deficit

The deficit shown in the last line of the preceding table represents the net excess of Budget outlay over receipts. In other words, the estimated deficit shown for 1983–84 represents the Commonwealth Government budget sector's 'financing requirements'. Most such transactions involve the issue, repurchase, redemption or acquisition of Commonwealth Government securities, but some involve or are represented by changes in other assets or liabilities of the Commonwealth Government.

Specifically the deficit is financed as follows:

Net sales of Commonwealth Government securities (new issues *less* redemptions *less* net purchases from Commonwealth Government balances in the Trust Fund);

less net purchases of other investments from Commonwealth Government balances in the Trust Fund

plus minor items of indebtedness (such as borrowing by Australian Capital Territory housing trust account)

less net additions to cash balances, and funds provided for the International Monetary Fund and the Australian Wheat Board.

A table summarising the financial transactions of the Commonwealth Government budget sector for recent years is given on page 353, Table 1 in 1983–84 *Budget paper* No. 1.

COMMONWEALTH AUTHORITIES

In addition to the group of authorities of the Commonwealth Government whose transactions are covered by the Budget (i.e. itemised in the Consolidated Revenue Fund, the Loan Fund, or recorded in a Trust Fund), there are a number of organisations owned or controlled by the Commonwealth Government whose transactions do not, for the most part, pass through the Public Account. This category includes public enterprises such as the Australian Postal Commission, Australian Telecommunications Commission, Overseas Telecommunications Commission, Qantas, Trans-Australia Airlines, the Australian Shipping Commission, the Snowy Mountains Hydro-electric Authority, the Reserve Bank and the Commonwealth Banking Corporation. Public enterprises, it should be noted, are bodies which aim at covering the bulk of their expenses by revenue either from sales of goods and services (trading enterprises), or by charges for services and net interest receipts (financial enterprises). As well as these enterprises, there are other public authorities which record most of their transactions outside the Public Account but have only minor independent sources of revenue and are financed almost entirely from funds voted to them each year from the Consolidated Revenue Fund. In order that the national accounting presentation may indicate as completely as possible the direct effect of the budget on demand, appropriations to this last group of authorities are treated as final expenditure in the Budget. Authorities in this category include the Australian Broadcasting Commission, Australian National University, National Capital Development Commission, and the Australian Atomic Energy Commission.

The transactions of Commonwealth Government bodies not covered by the Budget may be brought together and consolidated with the transactions recorded in the Budget to yield figures of the transactions of all Commonwealth Federal authorities. The remaining tables in this section have been prepared on that basis.

Public financial enterprises have been omitted from the consolidated accounts presented here largely on the ground that combining the income and outlay and capital financing transactions of the Reserve Bank, the publicly owned trading and savings banks, government insurance offices and other public financial institutions with the equivalent transactions of public trading enterprises and general government seems to provide a less meaningful account of public sector activity. For example, omission of the borrowing and lending activities of the government banks and the Reserve Bank allows attention to be centred on the borrowing and lending activities of general government and public trading enterprises, which are quite different in nature and economic effect from the financing activities of the banking system.

Coverage—Northern Territory government authorities

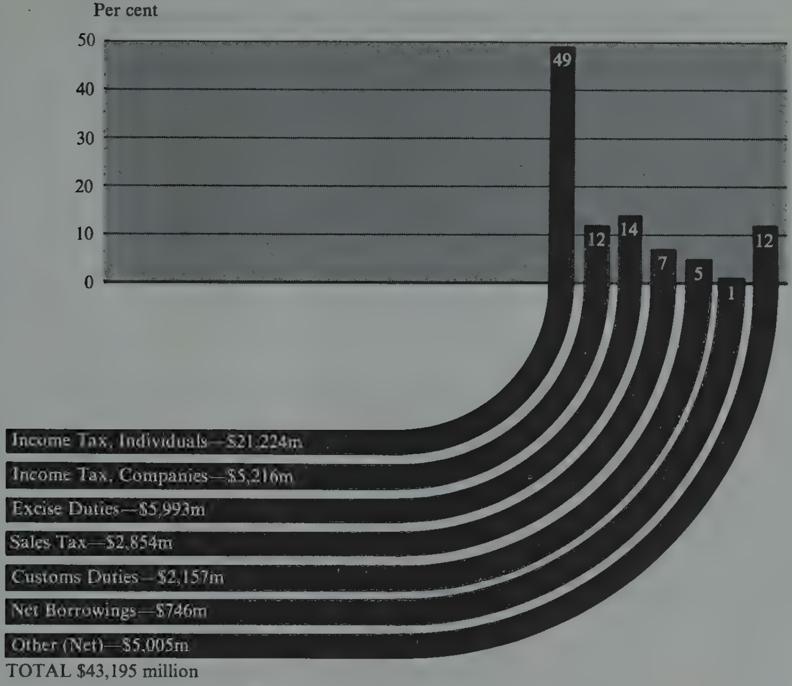
On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In public authority finance statistics

Northern Territory government authorities are grouped with State and local authorities from 1978-79 onwards. This results in a discontinuity in time series for the financial transactions of Commonwealth Government authorities because:

- In the period up to and including 1977-78 Commonwealth spending on State-type services in the Northern Territory is included under the various Commonwealth outlay categories such as final consumption expenditure and gross capital formation. Similarly, State-type taxation and income from N.T. public enterprises is included in the respective Commonwealth receipt categories.
- From 1978-79 onwards Commonwealth spending in respect of the Northern Territory consists to a large extent of grants and advances to Northern Territory government authorities while State-type taxation and income from N.T. public enterprises are no longer part of Commonwealth receipts.
- Not all State-type functions were fully transferred to the Northern Territory Government from 1 July 1978. Responsibility for health services was transferred on 1 January 1979 and responsibility for education services was transferred from 1 July 1979. The Commonwealth retains responsibility for certain State-type matters such as uranium mining and Aboriginal affairs (other than provision of services to Aboriginal communities).

COMMONWEALTH AUTHORITIES, 1981-82

RECEIPTS AND FINANCING ITEMS



OUTLAY

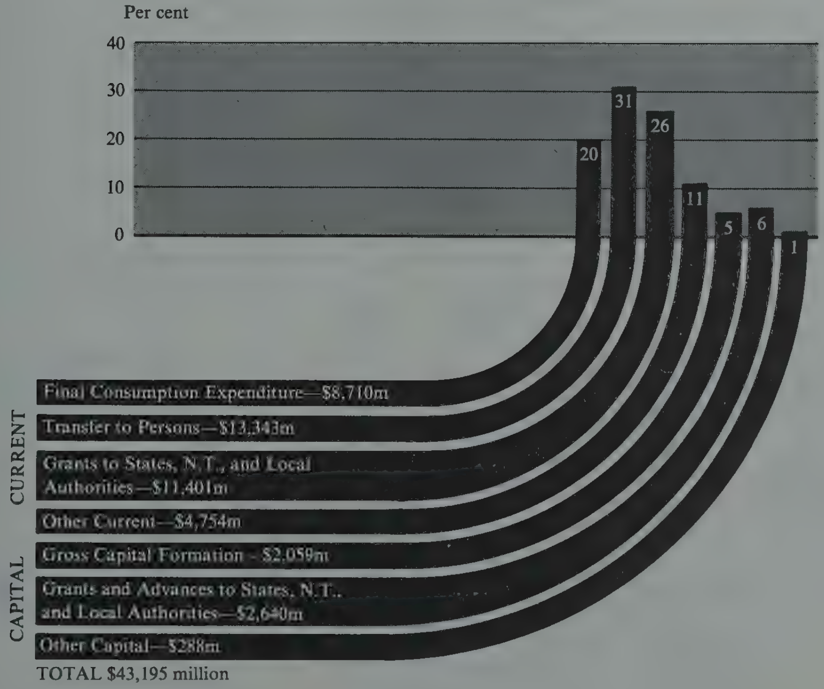


PLATE 43

Summary of outlay and receipts

The outlay and receipts, and outlay classified by purpose, of all Commonwealth authorities for the latest six-year period are given in the following tables.

COMMONWEALTH AUTHORITIES(*a*): OUTLAY AND RECEIPTS

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
OUTLAY						
Current outlay						
Final consumption expenditure	4,728	5,239	5,657	6,318	7,425	8,710
Interest, etc., paid	1,446	1,738	2,074	2,363	2,753	3,138
Transfers to persons –						
Personal benefit payments	7,392	8,285	9,110	9,904	11,235	13,091
Unfunded employee retirement benefits	121	139	162	181	207	252
Subsidies	252	424	526	690	856	948
Transfers overseas	388	417	475	520	575	668
Grants to States, Northern Territory and local government authorities	6,115	7,222	8,147	9,092	10,307	11,401
Total current outlay	*20,442*	*23,464*	*26,151*	*29,068*	*33,358*	*38,208*
Capital outlay						
Expenditure on new fixed assets	1,667	1,772	1,512	1,606	1,965	2,158
Expenditure on existing assets	4	−14	−93	−28	−419	−264
Increase in stocks	−50	−121	−206	−67	75	165
Grants for private capital purposes	110	130	132	167	138	228
Grants to States, Northern Territory and local government authorities	1,546	1,516	1,492	1,570	1,676	1,778
Advances to States, Northern Territory and local government authorities	1,278	1,261	1,127	896	936	862
Advances to other sectors	110	53	18	6	77	59
Total capital outlay	*4,665*	*4,597*	*3,982*	*4,150*	*4,448*	*4,986*
Total outlay	**25,107**	**28,062**	**30,133**	**33,219**	**37,807**	**43,195**
RECEIPTS AND FINANCING ITEMS						
Receipts						
Taxes, fees, fines, etc.	19,765	21,494	23,466	27,548	32,714	37,991
Income from public enterprises	657	819	1,010	992	992	1,319
Interest received from the States and the Northern Territory	1,032	1,174	1,278	1,376	1,569	1,738
Other interest, etc., received	161	207	185	239	290	339
Total receipts	*21,616*	*23,695*	*25,939*	*30,155*	*35,565*	*41,387*
Financing items						
Depreciation allowances	442	494	550	596	694	754
Funds provided for (−), or received from (+), International Monetary Fund	–	–	28	61	−107	–
Net sale of securities –						
Treasury bills and notes	363	194	1,547	705	1,312	−347
Commonwealth Government securities	2,098	2,979	2,470	893	−187	693
Public corporations securities	446	331	193	442	205	400
Net receipts of private trust funds	60	152	161	181	301	386
Reduction in cash and bank balances	−297	214	−480	525	−334	−83
Reduction in securities holdings	166	−232	−344	−590	192	114
Other funds available (including errors and omissions)						
Other reserves and provisions	15	9	33	38	15	−109
Capital transfers	151	167	41	59	43	
Change in creditors/debtors	25	−4	−59	82	43	
Other	22	64	54	72	64	
Total financing items	*3,492*	*4,368*	*4,194*	*3,064*	*2,241*	*1,808*
Total funds available	**25,107**	**28,062**	**30,133**	**33,219**	**37,807**	**43,195**

(*a*) Excludes financial enterprises.

COMMONWEALTH AUTHORITIES: OUTLAY, CLASSIFIED BY PURPOSE

($ million)

Purpose	*1979–80*		*1980–81*		1981–82	
General public services—						
General administration, n.e.c.	1,008.8		1,190.7		1,376.3	
External affairs	669.2		752.2		866.6	
Law, order and public safety	198.6		217.7		253.0	
General research	272.3		317.9		382.8	
Total general public services		*2,148.9*		*2,478.6*		*2,878.7*
Defence		3,007.7		3,536.5		4,135.4
Education—						
General administration, regulation and research	31.9		28.4		29.6	
Transportation of students	2.1		2.6		3.6	
Primary and secondary education	817.6		947.0		1,160.3	
Vocational training	199.7		239.0		260.9	
University education	875.0		950.2		1,091.6	
Other higher education	583.2		651.8		679.9	
Other education programs	98.6		109.9		122.0	
Total education		*2,608.1*		*2,928.9*		*3,347.9*
Health—						
General administration, regulation and research	92.5		103.1		114.8	
Hospital and clinical services	1,972.2		2,306.2		2,609.9	
Other health services	1,097.8		1,231.5		1,346.9	
Total health		*3,162.4*		*3,640.8*		*4,071.6*
Social security and welfare—						
General administration, regulation and research	184.1		213.5		267.3	
Care of and assistance to—						
Aged persons	3,639.2		4,072.2		4,663.6	
Incapacitated and handicapped persons	901.0		1,006.6		1,125.0	
Unemployed and sick persons	1,104.7		1,240.5		1,523.8	
Ex-servicemen	1,005.8		1,238.6		1,387.9	
Widowed and deserted spouses	845.9		1,068.6		1,323.3	
Families and children	1,055.5		1,000.9		1,100.1	
Other social security and welfare services	58.4		83.6		117.3	
Total social security, etc.		*8,794.7*		*9,924.5*		*11,508.3*
Housing and community amenities—						
Housing	252.6		286.4		361.6	
Community and regional development	100.8		101.4		65.0	
Protection of the environment	14.5		11.4		14.3	
Community amenities, n.e.c.	1.2		1.2		1.4	
Total housing, etc.		*369.2*		*400.5*		*442.3*
Recreation and culture—						
General administration, regulation and research	0.3		0.4		0.1	
Cultural facilities	42.6		55.3		60.2	
Support of the creative and performing arts	25.2		26.9		30.4	
Broadcasting services and film production	200.5		261.8		315.0	
Recreational facilities and services	32.3		34.9		34.0	
Other programs	11.0		13.9		23.3	
Total recreation, etc.		*311.9*		*393.2*		*463.1*
Economic services—						
General administration, regulation and research	449.6		557.7		648.5	
Agriculture, forestry and fishing	381.4		389.7		578.8	
Mining, manufacturing and construction	366.7		259.6		459.8	
Electricity and water supply	34.7		70.5		79.5	
Transport and communication	2,030.1		2,345.9		2,497.9	
Other economic services	90.8		157.4		203.1	
Total economic services		*3,353.2*		*3,780.9*		*4,467.6*
Other purposes—						
General purpose inter-authority transfers	7,089.6		7,899.7		8,721.4	
Natural disaster relief	10.3		70.6		20.8	
Interest	2,362.9		2,752.5		3,137.6	
Total other purposes		*9,462.8*		*10,722.8*		*11,879.8*
Total outlay, all purposes		**33,218.9**		**37,806.6**		**43,194.7**
Of which—						
Current outlay		29,067.2		33,359.1		38,208.4
Capital outlay		4,151.0		4,447.6		4,986.3

Main components of outlay

The following tables give details of the main components of the outlay of Commonwealth authorities, i.e. final consumption expenditure, expenditure on new fixed assets, personal benefits payments, subsidies and payments to the States and the Northern Territory. More detailed information relating to outlay classified by economic type and purpose, and outlay under specific purpose headings such as education, social security and welfare, is given in *Commonwealth Government Finance* (5502.0). Additional details of public authorities' transactions engaged in particular fields of activity, e.g. health, may be found in the relevant chapters of this Year Book.

Final consumption expenditure and expenditure on new fixed assets

Final consumption expenditure consists of current expenditure on goods and services by public authorities other than those classified as enterprises, *less* any charges made for goods and services which they themselves provide. Expenditure on new fixed assets consists of purchases of new durable assets *less* sales of previously rented dwellings. Purchases of defence equipment are treated as current expenditure and expenditure on new construction and maintenance of roads is treated as capital. The following tables show dissections by purpose of final consumption expenditure and expenditure on new fixed assets for the six years ended 1981–82.

COMMONWEALTH AUTHORITIES: FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE

($ million)

Purpose	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
General administration	728	843	866	955	1,105	1,272
External affairs	102	111	122	141	163	182
Law, order and public safety	112	138	150	168	204	245
General research	152	170	183	210	257	313
Total general public services	*1,095*	*1,262*	*1,320*	*1,474*	*1,729*	*2,012*
Defence	1,999	2,184	2,401	2,786	3,291	3,832
Education	235	256	287	250	280	326
Health	466	504	504	538	621	731
Social security and welfare	210	246	279	317	374	463
Housing and community amenities	53	49	47	41	40	34
Recreation and culture	208	223	243	271	319	394
Economic services—						
General administration, regulation and research	199	232	271	316	386	449
Agriculture, forestry, fishing	125	135	144	157	178	208
Mining, manufacturing and construction	21	28	28	34	36	30
Transport and communication	95	96	109	103	139	194
Other	21	23	24	30	33	37
Total economic services	*462*	*514*	*576*	*640*	*772*	*918*
Other purposes	–	–	–	–	–	–
Grand total	**4,728**	**5,239**	**5,657**	**6,318**	**7,425**	**8,710**

COMMONWEALTH AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED BY PURPOSE

I. GENERAL GOVERNMENT

($ million)

Purpose	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services —						
General administration	60.0	49.7	39.9	60.4	83.2	103.6
External affairs	25.5	24.4	12.0	9.1	13.9	15.5
Law, order and public safety	10.9	15.3	22.1	30.0	13.2	7.2
General research	23.6	18.0	29.6	49.3	61.3	67.0
Total general public services	*120.1*	*107.4*	*103.7*	*148.7*	*171.5*	*193.3*
Education	62.2	54.2	50.7	33.2	33.5	23.7
Health	58.3	53.5	36.5	31.4	22.4	17.4
Social security and welfare	8.5	6.7	5.6	2.9	4.0	4.0
Housing and community amenities	112.1	61.3	15.5	6.2	6.2	5.1
Recreation and culture	29.8	25.2	27.7	34.2	62.7	46.9
Economic services—						
General administration, regulation and research	8.8	6.1	7.6	11.6	8.8	7.9
Agriculture, forestry, fishing	8.1	16.0	6.1	7.4	6.3	5.1
Mining, manufacturing and construction	1.0	1.2	0.6	0.7	1.2	3.7
Transport and communication	46.0	73.6	49.0	50.0	69.9	83.5
Other economic services		0.5	0.1	0.1	0.3	0.8
Total economic services	*63.8*	*97.4*	*63.4*	*69.8*	*86.5*	*101.0*
Other purposes	–	–	–	–	–	–
Total general government	*454.7*	*405.8*	*303.1*	*326.5*	*386.8*	*391.4*

II. PUBLIC ENTERPRISES

($ million)

Purpose	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Public trading enterprises —						
General public services	0.9	0.5	0.3	0.7	1.4	0.9
Housing and community amenities Housing	23.5	17.9	2.4	2.6	2.2	2.4
Sewerage and drainage	28.8	14.8	5.1	3.6	1.1	0.8
Economic services —						
Technical services, n.e.c.	0.2	0.5	0.1	0.1	–	0.4
Mining activities	–	–	16.5	57.8	22.9	–
Manufacturing activities	5.8	5.5	3.8	4.6	8.0	4.3
Electricity, water supply	48.5	52.0	17.9	7.7	12.2	10.6
Transport and communication —						
Air transport	41.0	145.8	136.9	160.5	282.7	394.9
Rail transport	35.9	40.2	46.3	49.8	40.0	64.6
Sea transport	136.9	138.3	50.6	-3.9	11.1	6.5
Urban transit systems	1.6	7.2	6.7	0.6	1.2	2.5
Pipelines	18.2	2.1	7.7	2.4	18.0	8.9
Communications services	855.1	913.4	904.8	976.6	1,170.6	1,265.7
Total	*1,088.9*	*1,247.0*	*1,153.0*	*1,186.0*	*1,523.0*	*1,743.1*
Other economic services	15.3	27.6	10.2	16.3	6.6	4.4
Total public trading enterprises	*1,212.0*	*1,365.7*	*1,209.3*	*1,279.6*	*1,577.9*	*1,766.9*

Personal benefit payments

Total personal benefit payments during the latest six years are shown in the next table. Further information relating to items in this table is given in the appropriate chapters of this Year Book.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS
($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services						
General research						
Queen Elizabeth fellowships	528	567	531	748	–	–
Marine Science grants and fellowships	–	–	–	–	–	–
Assistance to inventors	32	33	34	76	76	–
Education	193,970	212,647	224,928	225,232	244,448	261,322
Health	1,140,399	1,010,432	1,197,982	1,341,824	1,583,252	1,947,660
Social security and welfare	6,033,849	7,033,812	7,656,473	8,311,428	9,372,948	10,843,855
Recreation—						
Overseas study fellowships	190	102	38	1	5	–
Economic services—						
General administration, regulation and research –						
Hostel tariffs of unemployed migrants	195	728	1,892	2,560	3,570	3,981
Maintenance of migrant families	6,035	5,510	6,766	7,629	8,990	11,658
Stevedoring industry attendance money, etc.	2,305	988	–	–	–	–
Widows' training scheme	21	–	–	–	–	–
National employment training scheme	12,809	16,163	16,931	10,511	–	–
Apprenticeship training	1,738	2,966	3,116	3,246	4,231	4,769
Skills training - individuals	–	–	–	–	3,728	3,078
Youth training						
School to work transition	–	–	–	–	4,703	8,423
Pre-apprenticeship allowances	–	–	–	–	1,587	1,146
Special training						
Aboriginals	–	–	–	–	3,564	2,721
Disabled persons	–	–	–	–	866	615
Other work and training assistance	–	709	1,264	1,270	2,700	1,795
Other	–	–	–	–	–	–
Total	*23,102*	*27,064*	*29,969*	*25,216*	*33,939*	*38,186*
Agriculture, forestry, fishing						
War service land settlement rent remissions, etc.	6	1	–	–	–	–
Allowances to agricultural trainees	–	–	–	–	–	–
Total	*6*	*1*	–	–	–	–
Mining, manufacturing and construction						
Joint Coal Board Welfare fund	3	3	7	14	44	–
Total economic services	*23,108*	*27,067*	*29,976*	*25,230*	*33,983*	*38,186*
Other purposes	*201*	*2*	–	–	–	–
Total	**7,392,277**	**8,284,662**	**9,109,962**	**9,904,539**	**11,234,712**	**13,091,023**

Subsidies

The following table shows details of Commonwealth Government outlay on subsidies and bounties. Other assistance to primary producers is included in, for example, tables relating to personal benefit payments and payments to the States, and additional information is given in Chapter 13, Agricultural Industries.

COMMONWEALTH AUTHORITIES: SUBSIDIES

($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
Departmental cafeteria compensation	–	10	–	–	–	–
General Services	–	–	–	25	36	50
Health—						
Serum laboratories	250	1,200	2,100	2,938	3,653	4,255
Health insurance organisations subsidy	1,748	9,064	6,588	2,638	488	143
Total	*1,998*	*10,264*	*8,688*	*5,576*	*4,141*	4,398
Housing and community amenities—						
N.T. Housing Commission assistance	96	429	–	–	–	–
Recreation and related cultural services—						
Canberra Theatre Trust subsidy	167	199	191	376	271	–
Economic services—						
Assistance to employers—						
Stevedoring industry assistance	27,066	21,953	16,598	15,797	19,006	17,700
Apprenticeship training	44,350	74,712	108,574	61,784	94,954	121,302
Technical Services	–	–	–	-110	-13	–
Total	*71,416*	*96,665*	*125,172*	*77,471*	*113,947*	*139,002*
Assistance to agricultural and pastoral enterprises						
Dairy products subsidy	–	5,250	12,387	17,664	1,600	1,307
Dairy industry stabilisation	–	52,399	80,723	91,230	84,704	79,730
Wheat Industry Stabilisation (Reimbursement of borrowing costs)	–	–	–	7,712	23,198	22,192
Reimbursement by Wheat Board	810	–	–	–	–	–
Phosphate fertilisers bounty	38,733	42,057	46,202	51,425	46,763	43,396
Nitrogenous fertilisers bounty	15,180	13,329	10,413	7,300	4,605	5,265
Processed milk products bounty	–	–	–	–	–	–
Poultry industry assistance	11,128	10,625	9,772	18,275	20,467	21,689
Dried vine fruits stabilisation payments	658	768	216	–	2	2,052
Apple and pear stabilisation payments	4,168	595	463	2,891	815	–
Beef industry assistance	–	84,953	32,543	–	2	–
Meat exports to U.S.S.R.	–	–	–	–	–	–
Beef cattle freight subsidy	296	807	–	–	–	–
N.T. transport of stud stock	–	–	–	–	–	–
Sanctions against USSR and Iran—compensation paid	–	–	–	–	5,256	3,263
Other	–	–	–	21	9	–
Total	*70,973*	*210,783*	*192,719*	*196,518*	*187,420*	*178,894*
Assistance to mining enterprises—						
Oil search subsidy	–	–	–	–	–	–
Mary Kathleen Uranium Ltd—Costs concerning borrowing of uranium	168	102	–	–	–	–
Total	*168*	*102*	–	–	–	–

COMMONWEALTH AUTHORITIES: SUBSIDIES—*continued*
($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Assistance to manufacturing enterprises—						
Agricultural tractor bounty	4,880	5,700	5,490	8,263	6,979	6,857
Book bounty	8,034	9,538	12,463	13,662	15,005	15,704
Printed sheeting subsidy	300	451	500	737	555	596
Industrial research and development grants	15,400	13,649	22,750	30,599	46,413	21,753
Ship construction subsidy	21,301	7,605	3,559	833	-164	-31
Shipbuilding bounty	7,674	7,800	8,326	13,530	13,720	3,060
Export incentive grants	973	1,303	20,012	170,000	200,000	197,000
Export market development grants	24,079	30,000	38,001	45,000	60,000	84,000
Metal-working machine tools bounty	2,350	3,977	7,048	12,700	13,583	14,471
Structural adjustment assistance	637	–	–	–	–	–
Electronic components assistance	776	293	–	–	–	–
ADP equipment bounty	–	600	654	733	890	1,304
Commercial motor vehicles bounty	–	–	2,384	6,177	6,333	6,368
Textile yarns bounty	–	–	–	–	–	22,962
Injection moulding equipment bounty	–	–	–	2,010	2,000	1,102
Paper bounty	–	–	–	2,060	1,176	1,607
Penicillin bounty	–	–	–	–	634	688
Refined tin bounty	–	–	–	–	65	103
Non-adjustable wrenches bounty	–	–	–	–	367	361
Ship bounty	–	–	–	–	4,991	23,739
Other	–	149	730	606	869	201
Total	*86,404*	*81,065*	*121,917*	*306,910*	*373,416*	*401,845*
Assistance to air transport services—						
Air services subsidy	675	842	753	491	739	5,599
Assistance to sea transport services—						
Tasmania shipping service subsidy	4,109	2,000	2,000	2,000	2,300	2,300
Darwin shipping subsidy	–	–	–	–	1,500	1,500
Tasmanian freight equalisation scheme	16,409	20,927	24,700	27,561	29,473	29,421
Other	48	50	–	–	–	–
Total	*20,566*	*22,977*	*26,700*	*29,561*	*33,273*	*33,221*
Assistance to communications services—						
Other assistance to enterprises—						
Petroleum products prices scheme	–	–	42,929	63,429	108,552	133,426
N.T. petrol prices equalisation	–	72	5,124	7,348	11,775	14,102
Export finance insurance subsidy	298	354	1,496	2,600	4,683	6,357
Liquified petroleum gas subsidy scheme	–	–	–	–	20,288	30,731
Total	*298*	*426*	*49,549*	*73,377*	*145,298*	*184,616*
Natural disaster relief—						
N.T. freight subsidies	15	–	–	–	–	–
Total	**252,776**	**423,762**	**525,689**	**690,305**	**858,541**	**947,625**

Grants and advances to the States and the Northern Territory

Commonwealth Government financial assistance to the States and the Northern Territory takes two main forms: (i) grants for general and specific purposes, and (ii) assistance for developmental and other specific purposes in the form of repayable advances. Some information about these forms of financial assistance is given below, but for more complete information reference should be made to the Commonwealth Government Budget Paper No. 7 *Payments to or for the States, the Northern Territory and Local Government Authorities.* Further information also appears in chapters of this Year Book dealing with the specific function which the payments are designed to serve.

Grants to the States and the Northern Territory

The following tables show details of grants to the States and the Northern Territory for general and specific purposes. More detailed figures appear in *Commonwealth Government Finance* (5502.0).

COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES AND THE NORTHERN TERRITORY, 1981–82

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
FOR CURRENT PURPOSES								
General public services	161	231	61	61	25	11	3	553
Defence	574	471	553	65	200	109	–	1,972
Education	805,138	707,094	342,414	219,607	218,752	64,226	11,378	2,368,609
Health	5,367	8,745	5,323	125,179	10,354	42,787	1,760	199,516
Social security and welfare	10,997	9,691	3,114	5,169	4,047	2,062	452	35,532
Housing and community amenities	1,848	1,347	2,898	1,013	868	314	200	8,488
Recreation and culture	–	–	–	–	–	–	140	140
Economic services	12,328	3,823	9,911	2,326	2,119	780	48,792	80,079
Other purposes								
States' Personal Income Tax sharing entitlements	2,010,075	1,487,472	1,230,187	761,027	809,909	322,031	315,100	6,935,801
Additional assistance grant	–	–	–	–	–	–	20,000	20,000
Special grants	24,500	15,000	88,000	–	–	–	–	127,500
Financial assistance identified for health	477,736	325,936	165,155	8,606	155,039	4,747	26 093	1,163,312
Interest on State debt	5,835	4,254	2,192	1,408	947	534	–	15,170
Sinking fund on State debt	13,767	10,586	5,517	5,259	3,913	2,816	–	41,858
Natural disaster relief	6,576	7	2,328	–	347	89	–	9,347
Debt charge assistance	–	–	–	–	–	–	21,805	21,805
Local government assistance	128,058	89,300	59,158	30,178	32,945	11,227	1,680	352,546
Recreation leave and furlough entitlements	–	–	–	–	–	–	1,475	1,475
Total other purposes	*2,666,547*	*1,932,555*	*1,552,537*	*806,478*	*1,003,100*	*341,444*	*386,153*	*8,688,814*
Total grants for current purposes	**3,502,960**	**2,663,954**	**1,916,811**	**1,159,894**	**1,239,464**	**451,733**	**448,878**	**11,383,694**
FOR CAPITAL PURPOSES								
Education	124,107	99,896	56,700	33,332	36,567	10,537	7,833	368,970
Health	299	890	210	115	199	2,451	6	4,170
Social security and welfare	13,809	8,143	5,772	3,545	3,085	1,527	–	35,881
Housing and community amenities	25,593	15,934	13,010	13,535	12,034	3,669	18,950	102,725
Recreation and culture	523	3,060	3,090	330	386	1,543	165	9,096
Economic services								
General administration, regulation and research	–	–	–	–	–	–	–	–
Employment of Aboriginals	–	–	–	–	5	–	–	5
Soil and water resources management	4,689	2,915	6,456	2,647	3,507	235	1,991	22,441
Assistance to agricultural and pastoral industries	630	608	432	432	494	54	33	2,684
Electricity, gas, water supply	–	1,700	–	2,600	916	–	–	5,216
Rail transport	–	–	–	–	–	–	–	–
Sea transport	–	–	–	–	–	–	–	–
Road systems and regulation	214,336	137,828	139,361	56,302	83,895	46,684	23,035	701,441
Urban transit systems	–	35,000	–	192	1,321	–	–	36,514
Total economic services	*219,655*	*178,051*	*146,249*	*62,173*	*90,138*	*46,973*	*25,059*	*768,301*
Other purposes								
Capital assistance	140,854	109,473	57,777	56,787	40,320	30,539	38,284	474,034
Natural disaster relief	145	1,081	4,082	–	1,012	314	–	6,634
Total grants for capital purposes	**524,984**	**416,526**	**286,890**	**169,817**	**183,741**	**97,553**	**90,297**	**1,769,810**
TOTAL GRANTS								
Total grants to the States	**4,027,944**	**3,080,480**	**2,203,701**	**1,329,711**	**1,423,205**	**549,286**	**539,175**	**13,153,502**

COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES AND THE NORTHERN TERRITORY
($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
FOR CURRENT PURPOSES						
General public services	13,140	11,450	11,905	12,641	424	553
Defence	1,199	1,362	1,744	1,794	1,751	1,972
Education	1,390,758	1,517,840	1,595,323	1,774,739	2,050,811	2,368,604
Health	720,325	1,038,323	1,114,339	1,227,257	1,398,971	199,516
Social security and welfare	24,844	36,500	46,177	49,647	44,468	35,532
Housing and community amenities	7,425	5,834	5,540	6,114	6,817	8,488
Recreation and culture	600	489	282	416	828	140
Economic services	40,539	45,548	48,609	71,532	81,119	80,076
Other purposes—						
States' Personal Income Tax sharing entitlements(*a*)	3,695,594	4,316,641	5,058,669	5,624,767	6,285,494	6,935,800
Financial assistance identified for health (*b*)	–	–	–	–	–	1,163,312
Additional grants	–	–	–	–	–	69,000
Special grants	27,000	24,800	21,700	12,400	6,700	58,500
Special revenue assistance	–	–	–	20,000	20,000	20,000
Interest on State debt	15,170	15,170	15,170	15,170	15,170	15,170
Sinking fund on State debt	31,635	33,747	35,959	38,148	39,937	41,857
Debt charges assistance	–	–	–	1,573	12,369	21,805
Natural disaster payments	1,925	2,311	2,679	1,641	24,713	9,347
Local government assistance	140,000	165,328	179,427	222,801	302,226	352,545
Establishment grants	–	–	330	7	–	–
Other	–	–	–	–	–	1,475
Total other purposes	*3,911,324*	*4,557,997*	*5,313,934*	*5,936,507*	*6,706,609*	*8,688,811*
Total grants for current purposes	**6,110,154**	**7,215,343**	**8,137,852**	**9,080,646**	**10,291,796**	**11,383,692**
FOR CAPITAL PURPOSES						
Education	327,763	343,108	363,718	325,110	321,472	368,970
Health	132,455	68,902	17,784	12,735	8,165	4,170
Social security and welfare	15,233	16,266	19,088	35,020	35,791	35,881
Housing and community amenities	37,171	12,310	13,752	90,953	102,087	102,725
Recreation and culture	8,976	5,540	5,767	5,405	5,837	9,096
Economic services—						
General administration, regulation and research	–	–	–	–	–	–
Employment of Aboriginals	–	68	28	17	9	5
Soil and water resources management	11,636	10,833	10,804	17,009	21,806	22,441
Assistance to agricultural and pastoral industries	8,550	7,413	7,167	2,720	2,758	2,684
Electricity, gas, water supply	3,910	1,800	2,403	3,745	3,127	5,216
Rail transport	490	14	–	–	863	–
Sea transport	15	–305	–178	–	–	–
Road systems and regulation	456,215	493,224	513,728	572,914	640,663	701,441
Urban transit systems	58,403	51,000	41,869	42,084	44,057	36,514
Other	832	–	–	–	–	–
Total economic services	*540,051*	*564,047*	*575,821*	*638,489*	*713,283*	*768,301*
Other purposes—						
Natural disaster relief	23,697	20,820	9,844	6,870	8,230	6,633
Capital assistance	452,000	477,930	477,936	450,803	474,034	474,034
Total grants for capital purposes	**1,537,346**	**1,508,923**	**1,483,710**	**1,565,384**	**1,668,898**	**1,769,810**
TOTAL GRANTS						
Total grants to the States and the Northern Territory	**7,647,500**	**8,724,266**	**9,621,562**	**10,646,030**	**11,960,694**	**13,153,502**

(*a*) Prior to 1976, 77 'Financial assistance grants'. (*b*) From 1981-82 onwards part of Commonwealth Government specific purpose grants to the States for health has been replaced by additional General Revenue Grants and is shown in this table in the category 'Other purposes, Financial assistance identified for health'.

General purpose grants

Financial Assistance Grants. Details of the financial assistance grants arrangements existing in 1972–73 and previous years are given in earlier issues of the Year Book (*see* No. 60, page 578.)

Arrangements for the years 1973–74 to 1975–76 are embodied in the *States Grants Act* 1973. Under these arrangements the financial assistance grants increase each year in proportion to the increase in average wages in Australia as a whole in the year ending 31 March in the year of payment and to the increase in each State's population in the year ending 31 December in the year of payment, and by a betterment factor of 1.8 per cent. Adjustments were made to these arrangements to reduce the grants when the Commonwealth assumed full responsibility for financing tertiary education from 1 January 1974 and on account of transfers of railways from South Australia and Tasmania to the Commonwealth. Financial assistance grants additional to the grants determined by the formula were paid to Western Australia in 1973–74 and 1974–75, and to Tasmania in 1974–75. In 1975–76, $220 million was paid to the States in addition to the amounts otherwise payable in that year and in the same proportion.

These arrangements were replaced by the *Personal Income Tax Sharing Entitlements* between the Commonwealth and the State and local governments which came into operation in 1976–77. A comprehensive description of this scheme is given in the Commonwealth Budget Paper *Payments to or for the States, the Northern Territory and Local Government Authorities.*

The following table shows the calculations underlying the States' tax sharing entitlements in 1980–81:

DISTRIBUTION OF STATES' PERSONAL INCOME TAX SHARING ENTITLEMENTS IN 1980–81

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Total*
(1) Population at 31 December 1980(*a*)	5,183,259	3,907,934	2,275,707	1,302,404	1,276,696	424,617	14,370,617
(2) Per capita relativities(*b*)	1.02740	1.00000	1.39085	1.52676	1.66516	2.00188	..
(3) Row (1) weighted by Row (2)	5,325,280	3,907,934	3,165,167	1,988,458	2,125,903	850,032	17,362,774
(4) Percentage distribution of Row (3) between States (per cent)	30.67067	22.50754	18.22962	11.45242	12.24403	4.89572	100.00000
(5) Share of 39.87 per cent of $12,670.8 million(*c*)—Distributed according to Row (4) $'000	1,839,065	1,349,590	1,093,078	686,706	734,172	293,556	5,996,167
(6) Amount guaranteed under Section 8 of the Act (Financial Assistance Grants formula) (*d*) $'000	1,833,139	1,354,860	1,044,929	691,540	723,874	298,602	5,946,944
(7) States' entitlements under the Act ($'000) (*e*)	1,839,065	1,354,860	1,093,078	691,540	734,172	298,602	6,011,318

(*a*) Determined in accordance with section 9 of the *States (Personal Income Tax Sharing) Act* 1976. (*b*) Relativities specified in section 4 (1) of the Act. (*c*) Net personal income tax collections (excluding receipts from the Health Insurance levy) in 1979–80 as determined by the Commissioner of Taxation in accordance with section 6 of the Act. (*d*) The guarantee arrangements for 1980–81 were adopted at the 7 December 1979 Premiers' Conference. The guarantee ensures that each State will receive no less in real terms than the amount it received in 1979–80 as measured by the Consumer Price Index for the four quarters to March 1981 compared with the four quarters to March 1980 in the capital city of the State. (New South Wales 10.20 per cent, Victoria 9.80 per cent, Queensland 9.70 per cent, South Australia 9.70 per cent, Western Australia 9.20 per cent and Tasmania 9.50 per cent). (*e*) For New South Wales, Queensland and Western Australia, amounts in Row (5); for Victoria, South Australia and Tasmania amounts in Row (6).

Special Grants. These grants are paid to the financially weaker States as supplements to the financial assistance grants. They are paid on the recommendation of the Commonwealth Grants Commission. The recommendation by the Commission for payment of a special grant consists of two parts: one part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the audited budget results and standards of effort and of services provided in that year for both the claimant State and the States which the Commission takes as 'standard' (New South Wales and Victoria at present); and the other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment. Queensland has been the only applicant State in the period 1976-77 to 1980-81. (Tasmania, which had withdrawn from claimancy in 1974-75, applied on 30 June 1978 for a special grant in respect of 1977-78 but subsequently withdrew its application.) A condition of the agreement reached at the June 1981 Premiers' Conference for provision of additional assistance to New South Wales, Victoria and

Queensland for the year 1981-82 was that none of these States would seek a special grant in respect of that year. Queensland, which had already sought a special grant in respect of 1981-82, subsequently withdrew its application. The following table shows special grants paid in recent years.

COMMONWEALTH GRANTS COMMISSION: SPECIAL GRANTS (*a*)

($'000)

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	1982–83
Queensland	24,800	21,700	12,400	6,700	58,500	−19,650

(*a*) Amounts actually paid each year.

Capital assistance grants. Since 1970–71 the Commonwealth Government has provided a portion of the State's Loan Council programs in the form of interest-free capital grants. The grants replace State borrowings and thereby relieve them of debt charges they would otherwise have had to pay. These grants, which were authorised by the *States Grants* (*Capital Assistance*) *Acts*, totalled $477.9 million in 1977–78 and 1978–79, $415.0 million in 1979–80, $435.8 million in 1980–81 and 1981–82, and $457.7 million in 1982–83.

Specific purpose grants

The Commonwealth Government has provided financial assistance for certain specific types of expenditure by the States for many years. Unlike the general purpose grants, these current and capital grants are 'tied', that is, they are subject to conditions as to the purposes for which they may be spent. Purposes for which such grants have been made include educational programs, hospital development programs, welfare services for the aged, road construction, natural disaster relief and, since 1974–75, assistance to local government authorities. Specific purpose grants amounted to $3,904.9 million in 1977–78, $4,053.4 million in 1978–79, $4,538.1 million in 1979–80, $4,173.7 million in 1980–81 and $4,430.2 million in 1981–82 and $5,581.7 million in 1982–83. From 1979–80 onwards the figures include specific purpose grants made to the Northern Territory.

For details of the various specific purpose programs reference should be made to the Commonwealth Budget Paper *Payments to or for the States, the Northern Territory and Local Government Authorities*.

Advances to the States

The Commonwealth is also providing financial assistance for State projects by way of repayable advances. Borrowings of the Loan Council which are advanced to the States for their work programs and advances for State housing projects represent the largest proportion of the total funds advanced. Full descriptions of the various programs for which funds have been advanced in recent years are given in *Payments to or for the States, the Northern Territory and Local Government Authorities*.

The following table shows figures of advances to the States and repayments of advances. More detailed figures appear in *Commonwealth Government Finance* (5502.0).

COMMONWEALTH AUTHORITIES: NET ADVANCES TO THE STATES AND THE NORTHERN TERRITORY 1981–82

($'000)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Defence	785	–286	1,251	249	–58	72	–	2,014
Social security and welfare . . .	–	–2	–	–	–	–	–	–2
Housing and community amenities	55,203	30,765	10,569	–9,376	13,086	7,047	6,546	113,841
Economic services—								
Soil and water resources management	–2,381	–211	–719	–	72	–	–	–3,239
Forest resources management . .	1,499	255	636	122	768	473	–	3,753
Assistance to manufacturing . .	–	–	–	–	–	–13	–	–13
Assistance to agricultural and pastoral industries	–1,204	–871	–1,860	770	847	–165	188	–2,294
Mining	–	–	–	–	–	–	–	–
Electricity, gas and water supply	–	–	–2,496	–99	–745	–2,989	–1,335	–7,664
Rail transport	11,304	2,164	6,094	–	–503	–	–	19,059
Sea transport	–	–	–100	–	–	–132	–	–232
Other transport and communication	–	–	–570	–	–	–	–	–570
Total economic services .	*9,218*	*1,337*	*985*	*793*	*439*	*–2,826*	*–1,147*	*8,799*
Other purposes—								
State works programs	209,775	166,069	87,175	86,787	59,927	48,180	74,790	732,703
Special resource assistance . .	–	–	–	–	–	–	–	–
Natural disaster relief	6,985	–321	2,388	–2,036	–1,949	–253	–	4,814
Total other purposes . .	*216,760*	*165,748*	*89,563*	*84,751*	*57,978*	*47,927*	*74,790*	*737,517*
Total net advances . . .	**281,969**	**197,564**	**102,366**	**76,417**	**71,446**	**52,220**	**80,188**	**862,171**

Minus sign (–) denotes excess of repayments.

COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES AND THE NORTHERN TERRITORY
($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
GROSS						
Defence	35,114	22,519	11,600	1,455	1,320	3,004
Social security and welfare	–	–	–	–	–	–
Housing and community amenities	474,741	441,646	355,424	211,497	222,003	184,724
Economic services—						
Assistance to agricultural and pastoral industries	31,981	37,489	39,812	40,739	14,274	13,701
Other	48,900	8,174	10,770	11,733	20,852	28,880
Other purposes—						
State works programs	904,000	955,867	955,867	901,606	948,068	948,068
Other	4,828	34,369	14,444	7,308	47,381	13,801
Total gross advances	**1,499,564**	**1,500,065**	**1,387,917**	**1,174,339**	**1,253,896**	**1,192,179**
REPAYMENTS						
Defence	734	789	840	894	941	991
Social security and welfare	–	–	2	2	2	2
Housing and community amenities	25,191	28,332	32,500	35,346	42,635	70,884
Economic services—						
Assistance to agricultural and pastoral industries	8,548	11,074	13,368	19,581	41,662	15,995
Other	13,116	13,352	15,375	19,333	17,510	17,785
Other purposes—						
State works programs	159,323	171,032	185,269	195,210	204,295	215,365
Other	14,589	14,343	13,396	7,972	10,386	8,987
Total repayments	**221,501**	**238,922**	**260,750**	**278,337**	**317,428**	**330,008**
NET						
Defence	34,380	21,730	10,760	561	379	2,014
Social security and welfare	–	–	−2	−2	−2	−2
Housing and community amenities	449,550	413,314	322,924	176,152	179,368	113,841
Economic services—						
Assistance to agricultural and pastoral industries	23,433	26,415	26,444	21,158	−27,388	−2,294
Other	35,784	−5,178	−4,605	−7,600	3,342	11,095
Other purposes—						
State works programs	744,677	784,835	770,598	706,396	743,773	732,703
Other	−9,761	20,026	1,048	−664	36,995	4,814
Total net advances	**1,278,063**	**1,261,142**	**1,127,167**	**896,001**	**936,468**	**862,172**

Minus sign (−) denotes excess of repayments.

Main components of receipts

The main components of the receipts of Commonwealth authorities are taxation, income of public enterprises and other factor income transfers, and borrowing and financing transactions. Taxation constitutes by far the major source of receipts. In recent years, however, borrowing has become an increasingly significant source of funds for Commonwealth authorities.

In what follows, an account is given of the system of Commonwealth Government taxation, and some details are given of the current operations of Commonwealth public enterprises. Borrowings and other financing activities of Commonwealth authorities are dealt with for convenience in a later section relating to the debt of all public authorities.

Commonwealth Government taxation—summary

The following tables show Commonwealth Government taxation receipts classified by type of tax for the past six years, and the proportion of each type to total collections.

COMMONWEALTH AUTHORITIES: TAXATION BY TYPE OF TAX(*a*)

($'000)

Type of tax	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Taxes—						
Income taxes—						
Individuals(*b*)	11,046,664	12,122,158	12,797,174	15,032,479	17,532,123	21,204,499
Superannuation Funds	–	–	–	7,618	11,129	19,816
Companies(*c*)	2,803,079	3,072,372	3,002,052	3,360,357	4,638,923	5,009,596
Dividend (withholding)	71,969	87,700	88,094	99,912	114,108	125,610
Interest (withholding)	24,408	30,153	25,975	41,018	46,596	78,957
Mining (withholding)	–	–	–	200	261	530
Total income taxes	*13,946,120*	*15,312,383*	*15,913,295*	*18,541,584*	*22,343,140*	*26,439,008*
Estate duty	76,189	95,823	82,061	48,398	17,123	4,167
Gift duty	11,486	6,574	1,445	529	–82	224
Rates on land	15,503	17,010	15,011	16,540	19,249	20,910
Customs duty on coal exports	121,329	100,165	93,524	90,716	84,947	96,943
Customs duties on imports	1,152,016	1,131,817	1,363,041	1,538,064	1,799,488	2,059,706
Excise duties—						
Crude oil and LPG	340,000	469,000	1,227,000	2,270,200	3,107,900	3,163,300
Other	2,145,420	2,264,490	2,617,686	2,695,138	2,726,125	2,830,493
Sales tax	1,650,256	1,757,702	1,769,840	1,864,813	2,102,254	2,854,266
Primary production taxes	189,006	172,397	215,690	273,880	292,217	234,109
Broadcast station licences	1,200	1,508	1,843	2,184	2,484	2,913
Television station licences	6,028	10,469	12,724	15,946	19,005	28,020
Stevedoring industry charge	46,884	28,955	19,004	20,137	19,483	18,232
Payroll tax	18,644	19,583	13,142	12,373	13,184	15,986
Departure tax	–	–	11,966	18,384	18,720	36,090
Other taxes	15,496	19,107	18,487	18,765	19,619	26,460
Total taxes	*19,735,577*	*21,406,983*	*23,375,759*	*27,427,651*	*32,584,856*	*37,830,827*
Fees from regulatory services	15,264	21,526	22,730	48,658	51,795	65,294
Fines	3,121	3,838	4,229	4,228	4,207	7,296
Unfunded employee retirement contribution	51,680	61,087	63,129	67,124	72,922	86,346
Other current transfers n.e.c.	678	554	403	569	663	928
Total taxation	**19,806,320**	**21,493,988**	**23,466,250**	**27,548,230**	**32,714,443**	**37,990,691**

(*a*) From 1978–79 excludes taxes collected by Northern Territory Government authorities. (*b*) Includes Medibank levy payable from 1 October 1976 to 31 October 1978. (*c*) Excludes income tax paid by public enterprises: 1976–77, $21.4m; 1977–78, $23.1m; 1978–79, $34.6m; 1979–80, $46.5m; 1980–81, $55.8m; 1981–82, $43.1m.

Taxes on income

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July 1942 the Commonwealth Government, under the uniform tax arrangement, has been the only authority imposing taxes on income.

The laws dealing with the assessment and imposition of income tax at 31 October 1982 were—*Income Tax Assessment Act* 1936 (later referred to as 'the Assessment Act'); Acts declaring rates of tax—*Income Tax (Rates) Act* 1982, *Income Tax (Individuals) Act* 1982, *Income Tax (Companies, Corporate Unit Trusts and Superannuation Funds) Act* 1982, *Income Tax (Non-resident Companies Act*) 1978, *Income Tax (Dividends and Interest Withholding Tax) Act* 1974, *Income Tax (Drought Bonds) Act* 1969, *Income Tax (Withholding Tax Recoupment) Act* 1971, *Income Tax (Bearer Debentures) Act* 1971, *Income Tax (Mining Withholding Tax) Act* 1979, *Income Tax (Film Royalties) Act* 1977, *Income Tax (Diverted Income) Act* 1981, Income Tax Regulations and Income Tax (Indexation) Regulations.

Both individuals and companies are liable for income tax. Private companies are subject to tax on certain undistributed income in addition to the primary income tax levied on all companies.

The operation of the *Assessment Act* is affected by other Acts, the more important of which are:

(a) *Taxation Administration Act* 1953, which provides for the administration of certain Acts relating to taxation and the screening for taxation purposes of applications for exchange control approval.

(b) *Income Tax* (*International Agreements*) *Act* 1953, which gives the force of law to agreements with other countries for the avoidance of double taxation. Australia has concluded comprehensive agreements for the avoidance of double taxation with the United Kingdom, the United States of America, Canada, New Zealand, Singapore, Japan, the Federal Republic of Germany, the Netherlands, France, Belgium, the Philippines, Switzerland, Malaysia, Sweden and Denmark. Agreements with Norway and the Republic of Korea and a revised agreement with the United States have been signed but have not yet entered into force. Also, limited agreements dealing with airline profits have been concluded with France, Italy and Greece.

(c) *The States* (*Personal Income Tax Sharing*) *Act* 1976, which provides for the States to receive a specified proportion of net personal income tax collections to 30 June 1981.

(d) *The States (Tax Sharing and Health Grants) Act* 1981, operative as from 1 July 1981, under which the States are to receive a proportion of total Commonwealth tax collections.

(e) *Income Tax (Arrangements with the States) Act* 1978, which enables each State to increase or reduce personal income tax levied on residents of the State.

(f) *International Organizations* (*Privileges and Immunities*) *Act* 1963, and Regulations made under that Act, which provide for the exemption from income tax of certain income of international organizations and their officials.

(g) *Diplomatic Privileges and Immunities Act* 1967, which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.

(h) *The Loan* (*Income Equalization Deposits*) *Act* 1976, which provides for the making of interest bearing income equalization deposits by primary producers with the Commissioner of Taxation.

(i) *Consular Privileges and Immunities Act* 1972, which provides for the exemption from income tax of certain income of consular representatives, their staff and families.

(j) *Loan* (*Drought Bonds*) *Act* 1969, which authorizes the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds have become redeemable.

(k) *Taxation Debts (Abolition of Crown Priority) Act* 1980, which abolishes priority accorded to certain Crown Debts.

(l) *The Crimes (Taxation Offences) Act* 1980, which established a number of criminal offences relating to the fraudulent evasion of income tax (and sales tax) by stripping companies or trusts of their capacity to pay.

A resident individual is required to lodge a return of income when his total income from all sources in Australia is in excess of $4,462 in 1982–83. However, in the case of a resident minor i.e., a person under the age of 18 years at the end of the year of income, a return is to be lodged where income exceeds $1,040. Except in the case of a non-resident in receipt of a taxable Australian social security or repatriation pension, allowance or benefit (in which case the position is the same as for a resident), a non-resident individual is required to lodge a return of income where his total income (other than dividends or interest on which withholding tax has been paid) from all sources in Australia exceeds $585. In the case of a non-resident minor, a return is to be lodged where income exceeds $136 in 1982 83. (see page 614).

Non-profit companies with total incomes in excess of $416 and all other companies, partnerships and trusts deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax). The amount shown on the assessment notice is therefore adjusted against the amount already paid, and any difference is either collected or refunded.

Taxes on income—individuals

Pay-as-you-earn-system

Salary and wage earners are subject to tax instalment deductions by employers according to prescribed scales which show the amount to be deducted according to income. Under the group employer scheme, the amount deducted is required to be regularly remitted to the Australian Taxation Office.

Not later than 14 July each year, employers are required to supply each employee with a group certificate showing the amount earned and deductions made during the year ended 30 June.

Under the tax stamp scheme for employers other than group employers, a tax deduction sheet in two parts is used. Every four weeks the employer purchases tax stamps for the amount of deductions made each pay day and attaches the tax stamps to the tax stamps sheet in the space provided and the tax checks (attached to the stamps) in the space provided on the tax check sheet. At the end of the year the employer gives the employee the tax stamp sheet and sends the tax check sheet to the Taxation Office. The tax stamp sheet is then used in the same way as a group certificate.

Individuals with taxable income other than salary or wages of $1,000 or more in 1982–83 may be required to pay provisional tax in respect of that income. Provisional tax is not generally charged, however, where tax instalment (PAYE) deductions made in the previous income year exceeded 95 per cent of the net tax payable for that year and provisional tax was not imposed previously. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. In order to account for an expected rise in provisional incomes in 1982–83, provisional tax is calculated using 1982–83 rates of tax applied to 1981–82 income increased by 10 per cent. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. The assessment notice shows the tax assessed on income from the previous year less any provisional tax already paid for that year and provisional tax payable for the current year. Taxpayers may apply to vary the amount of provisional tax imposed if his or her circumstances change during the year.

Assessable income—individuals

Assessable income (from which deductions are made to arrive at taxable income) basically includes all receipts within the ordinary meaning of the word 'income', but excludes items of income that are specified as exempt. Assessable income specifically includes certain receipts such as casual profits arising from the sale of property held less than one year and profits arising from the sale of property acquired for the purpose of profit-making by sale regardless of the period the property is held before sale. The value to employees of allowances and benefits given by employers for services rendered is also specifically included in the assessable income of the employees. Receipts such as gifts (other than gratuities received by an employee in the course of employment), legacies, lottery wins and other receipts of capital generally do not form part of the assessable income.

Exemption from tax is provided by the Assessment Act in respect of a number of specified classes of income – for example, certain war pensions; invalid pensions; family allowances; income received from a scholarship, bursary or other educational allowance; the income of charitable institutions and public hospitals, certain foreign income where it has been taxed overseas, and income of certain Australian residents derived from personal services performed overseas.

Deductions

The taxable income to which the rates of tax are applied is arrived at by deducting from the assessable income any allowable deductions.

Deductions from assessable income are authorised for losses and outgoings incurred in gaining or producing assessable income or necessarily incurred in carrying on a business for that purpose except to the extent that they are of a capital, private or domestic nature, are incurred in gaining or producing exempt income, or are of the kinds that are specifically declared to be not deductible by provisions of the Assessment Act. In addition, certain other deductions are specifically authorised by the Assessment Act.

Deductions allowable include trading losses incurred in previous years, bad debts, certain home insulation expenditure, depreciation, gifts to various institutions and, in certain circumstances, rates and land taxes paid. Expenditure of a capital nature incurred under a contract entered into after 19 July 1982 in relation to mining operations, is eligible for deduction on a straight line basis by reference to the lesser of 10 years or the estimated life of the mine or oil field. Expenditure on mining plant may also be written off on that basis or, if the taxpayer chooses, by depreciation allowances. Exploration or prospecting expenses incurred by general (non-petroleum) mining companies are allowable as deductions against net assessable income from mining activities in the year in which the expenditure is incurred. Expenditure on exploration or prospecting for petroleum is immediately deductible against income from any source. Deductions are also available for the cost of converting certain oil fired industrial equipment to use other energy sources. The deduction, which replaces annual depreciation allowances, is an amount equal to the cost of the conversion. The deduction is allowable in equal instalments over 2 years, where costs were incurred after 30 April 1981. A special allowance of 40 per cent of the cost of certain capital expenditure incurred on the purchase or construction of certain non-oil fired plant to replace oil fired plant is also available. Normal depreciation allowances apply to the plant and the 40 per cent allowance takes the place of any investment allowance that otherwise might have applied. A special loading applies to increase the depreciation rates on eligible plant. For plant contracted for on or after 1 May 1981 the loading is set at 18 per cent. New and second hand plant (excluding structural improvements and motor vehicles of a kind previously excluded from the 18 per cent loading) acquired under a contract entered into, or the construction of which by the taxpayer commenced, after 19 July 1982 is to be depreciated on a prime cost basis at a rate of either 20 per cent or 33⅓ per cent. The 20 per cent rate applies to eligible plant of a kind that under the previous system qualified for depreciation at a prime cost rate (including the 18 per cent loading) of 20 per cent or less, and the 33⅓ per cent applies where the previous prime cost rate was greater than 20 per cent. Where applicable, the investment allowance continues to be available and, in cases where the previous depreciation arrangements confer greater benefits than under the present scheme, a taxpayer is entitled to retain the previous arrangements.

Certain expenditure of a capital nature incurred by primary producers in carrying out improvements to their land is deductible over 10 years. Capital expenditure on certain soil conservation operations is allowable in full in the income year in which the expenditure is incurred. Certain expenditure in connection with conserving or conveying water for use in a business of primary production is deductible in the year of expenditure. Expenditure incurred by a primary producer before 1 July 1984 in constructing stockyard or subdivisional fences where their construction is certified as being desirable for the eradication or control of bovine brucellosis or tuberculosis is also deductible in the year of expenditure. Certain new items of plant and machinery acquired for use in a business of primary production are depreciable in equal instalments over 5 years, as are certain structural improvements for the storage of hay, grain or fodder. New primary production plant of a kind that previously qualified for the special 20 per cent prime cost depreciation rate is eligible for a 33⅓ per cent prime cost rate if acquired under a contract entered into, or where construction by the taxpayer commenced, after 19 July 1982. Deductions are allowable in respect of cash deposits made by primary producers (income equalisation deposits), which fall for inclusion in assessable income on withdrawal.

Deductions may also be allowed in respect of expenditure on certain plant and machinery by way of an investment allowance. The rate of the allowance is 18 per cent of qualifying expenditure for plant contracted for after 30 April 1981.

Deductions are also allowable for the capital cost of connecting mains electricity to a property on which a business is carried on. A 100 per cent depreciation allowance is available for the cost of certain plant used in Australia exclusively to store fuel held for use in a business as fuel or as trading stock for disposal. Special concessions involving a deduction loading and income exemption are available for capital investment in the production of certain new Australian films. Special rates of depreciation on a prime cost basis are available for new and second-hand plant used in the production of basic iron and steel products. The new rate will be 20 per cent except where, under existing law, eligible plant would attract a rate of more than 20 per cent. In those cases, a 33⅓ per cent rate will apply. Depreciation allowances in respect of new non-residential income-producing buildings are available at the rate of 2½ per cent per annum in respect of the construction cost of eligible buildings where construction of the buildings commenced after 19 July 1982.

Living-away-from-home allowance. Where an allowance is paid to an employee under any award, industrial agreement, etc.—

(a) if it is received in cash and does not exceed $7 per week, a deduction is allowable of the amount of the allowance, up to $5 per week;

(b) if it is received otherwise than in cash and exceeds a value of $2 per week but does not exceed a value of $5 per week, a deduction is allowable of the excess of that value over $2 per week.

In any other case the deduction allowable is the amount which the Commissioner deems reasonable but may not exceed the total amount received less $2 per week.

Subscriptions. When they are paid in respect of membership of any trade, business or professional association or union.

Gifts. Those of $2 and upwards made to specified funds, authorities and institutions including public benevolent institutions, approved research institutions for scientific research, building funds for schools conducted by non-profit organisations, certain approved voluntary overseas aid organisations, etc.

Superannuation contributions of eligible self-employed persons and employees not covered by funds to which any other person contributes for their benefit that are paid after 19 August 1980 to approved funds are deductible to a maximum $1,200 in any one year of income. Any excess of contributions over $1,200 falls for consideration under the superannuation provisions subject to concessional rebate (see page 572).

Rebates of Tax

From the gross amount of tax calculated by applying the relevant rate to the taxpayer's taxable income, a deduction is made for any rebates allowable to the taxpayer.

Dependant, housekeeper and sole parent rebates. A concessional rebate of the relevant amount specified below for each *dependant* is allowable to a resident taxpayer if, during the whole of the year of income, the taxpayer is the sole contributor to the dependant's maintenance and that dependant does not have a separate net income in excess of $282.

Dependant	*Maximum rebate 1982–83*
	$
Spouse or daughter-housekeeper—where there is a dependent child or student child	963
Spouse or daughter-housekeeper—where there is not a dependent child or student child	830
Parent or parent-in-law	749
Invalid relative	376

If a person in one or other of these dependant categories is a dependant during part only of the year of income (such a person residing with the taxpayer is ordinarily regarded as a dependant throughout the period of residence), the maximum rebate is proportionately reduced. Rebates for a parent, parent-in-law or invalid relative are allowable only in respect of residents of Australia.

Where a person has a separate net income in excess of $282 while a dependant of a taxpayer, the rebate otherwise allowable is reduced by $1 for every complete $4 by which the separate net income exceeds $282, irrespective of the period over which the person has derived the income. When two or more people contribute to the maintenance of a person who is a dependant of both of them, the rebate allowable is apportioned between the contributing taxpayers.

A concessional rebate is allowable to a resident taxpayer in respect of a *housekeeper* who, during the whole of the year of income, is wholly engaged in keeping house in Australia for the taxpayer and has the care of (*a*) a child or step-child of the taxpayer, less than 16 years of age; (*b*) an invalid relative in respect of whom the taxpayer is entitled to a rebate or any child under 16 years classed as a dependant for this purpose; or (*c*) the taxpayer's spouse if in receipt of an invalid pension under the *Social Security Act*. Where there is a dependent child or student, the maximum rebate for 1982-83, is $963, otherwise it is a maximum of $830. A child under 16 years referred to in (*b*) will be classed as a dependant where the taxpayer contributes to that child's maintenance and the child's separate net income is less than $1,786.

If these conditions apply for only part of the year, a proportionate rebate may be allowed. Where the taxpayer is married, a rebate may be allowable for a housekeeper if the housekeeper is engaged in caring for an invalid spouse (*see* (*c*) above) or the Commissioner is of the opinion that, because of special circumstances, it is just to allow a rebate. The rebate is not allowable in respect of any period during which the taxpayer is entitled to a deduction for a daughter-housekeeper.

A concessional rebate of $580 is allowable to a *sole parent* i.e., a resident single, widowed or divorced person who has the sole care of a child under sixteen years of age or a student (up to 25 years of age, receiving full-time education at a school, college or university), whose separate net income is ordinarily less than $1,786. The sole parent rebate is not allowable where the taxpayer is entitled to a rebate for a housekeeper or daughter-housekeeper or is living in a de-facto relationship.

Concessional rebates

Resident taxpayers may be allowed a concessional rebate in respect of certain expenses listed below amounting in total to more than $1,590. The amount of the rebate for 1982 83 is 30.67 per cent of the excess of the total expenditure over $1,590, but the rebate cannot exceed the tax otherwise payable.

Medical, dental, optical, etc. expenses. Rebates are allowable in respect of medical, dental, optical and therapeutic treatment expenses paid by the taxpayer, less any amounts in respect of those expenses which are received or receivable by the taxpayer or any other person from a Government or friendly society or medical benefit fund. Included are amounts paid in respect of artificial limbs and eyes, hearing aids and medical and surgical appliances and the remuneration of an attendant of a person who is blind or permanently confined to a bed or invalid chair. Domiciliary nursing care benefits are to be disregarded in calculating the rebatable amount in respect of medical expenses.

Rebates in respect of the above medical, etc. expenses are allowable only for expenditure in respect of a resident taxpayer, spouse, children under 21 years of age or any other 'dependant' resident in Australia, but not a 'housekeeper'.

Funeral, burial or cremation expenses. Rebates are allowable only in respect of the taxpayer's spouse, children under 21 years of age or any other 'dependant', but not a 'housekeeper', provided the dependant was a resident of Australia at the time of death. The amount of expenses allowable in respect of any one dependant is limited to $100.

Adopted children. Legal expenses and court costs of the kind normally incurred by a taxpayer in adopting a child.

Payments of life, sickness and accident insurance premiums and payments to a Friendly Society, Superannuation, Sustentation or similar Fund. Amounts subject to rebate are limited to a total of $1,200 in respect of such payments made on behalf of the taxpayer, his spouse or children. In the case of self-employed and "unsupported" employees contributions that are deductible, the excess over $1,200 not allowed as a deduction may be allowed as a rebate within the $1,200 limit on such rebatable expenditure. Where policies are taken out on or after 1 January 1973 or where the first premium of a policy was paid on or after that date, rebates for premiums of such policies are *not* allowable if the benefits, other than death benefits, are payable within a period of 10 years of commencement of risk.

Education expenses. An amount not exceeding $250 is allowed in respect of each child of the taxpayer or 'dependant' under 25 years of age receiving full-time education. Education expenses include expenditure for recognised school uniforms, on school fees, board and accommodation, text books, stationery, equipment and fares.

Self-education expenses. These are allowable where they are paid by the taxpayer for or in connection with a course of education undertaken by him for the purpose of gaining qualifications for use in carrying on a profession, business or trade or in the course of employment. The maximum amount subject to rebate is $250.

Calls. One-third of the amount of calls paid by the taxpayer in the year of income on shares owned by him in a company carrying on as its principal business afforestation in Australia.

Rates and land taxes. These are allowable when they are paid by a taxpayer who is personally liable. The maximum amount rebatable is $300 and must be in respect of a sole or principal place of residence.

Other rebates

Zone allowance rebate. A separate rebate is allowable to resident taxpayers who have resided in Zone A or B (prescribed isolated areas) for more than one half of the income year. The rebates are as follows:

(a) Ordinary Zone A: A rebate equal to the sum of $216 and 50 per cent of rebates for dependants, as a sole parent or for a housekeeper;
(b) Ordinary Zone B: A rebate equal to the sum of $36 and 20 per cent of relevant rebates;
(c) Special Zone A: A rebate equal to the sum of $750 and 50 per cent of relevant rebates; and
(d) Special Zone B: A rebate equal to the sum of $750 and 20 per cent of relevant rebates.

The special basic rebate is available to a taxpayer residing or spending the required period in a zone area but at a place in excess of 250 kilometres by the shortest practicable surface route from the centre of a population centre of 2,500 or more (based on 1976 census data).

The rebates for dependants, as a sole parent or for a housekeeper that may be the subject of a percentage increment to the basic zone allowance are:

		1982–83	
		$	
Sole parent	(*a*)	713	
Housekeeper	(*a*)	830	
Spouse, daughter-housekeeper	(*a*)	830	
Parent or parent-in-law		749	(*b*)
One child under 16 years, not being a student		376	
Each other child under 16 years, not being a student		282	
Student		376	
Invalid relative		376	

(*a*) Where there is a dependent child under 16 or a student child under 25, the maximum rebate will be $963. (*b*) Where one of these persons has a separate net income in excess of $282 while a dependant of a taxpayer, the amount to be taken into account is reduced by $1 for every complete $4 by which that income exceeds $282, irrespective of the period over which it was derived. Where two or more people contribute to the maintenance of a person who is a dependant of both of them, the amount to be taken into account is apportioned between the contributing taxpayers.

Amounts for a parent, parent-in-law or invalid relative are allowable only in respect of resident dependants.

'Child' or 'children' includes a legally adopted child, a step-child or ex-nuptial child of the taxpayer. 'Student' means a person less than 25 years of age who is receiving full-time education at a school, college or university.

Overseas service rebate. Separate rebates are also allowable to certain members of the Defence Force serving in prescribed overseas localities. Where the period of service is more than one-half of the year of income, the rebate is equal to the ordinary Zone A rebate. Where the period is less than one-half of the year of income, a proportionate part of the ordinary Zone A rebate is allowable.

Unused leave rebate. Where a taxpayer's taxable income exceeds $17,894 and includes lump sum payments in consequence of termination of employment or retirement for unused annual leave or unused long service leave attributable to service after 15 August 1978 or both, a rebate is allowable to limit the marginal rate on such payments to the standard rate of 30.67 per cent.

Rebate for government and other loan interest. A rebate of tax may be allowed in respect of certain Government and other loan interest included in an individual's taxable income. Particulars are given on page 567.

Capital subscription rebate. Section 160ACA of the Income Tax Assessment Act provides for a rebate of tax to shareholders in respect of capital subscribed to certain petroleum exploration and mining companies. The rebate allowable is 27 cents for each $1 of amounts paid on shares after 30 April 1981 by way of application and allotment moneys and calls which are applied by a company towards the paid-up value of its shares. (Prior to 1 May 1981 the allowable rebate was 30 cents for each $1 subscribed after 24 August 1977). The allowance of the rebate is conditional upon the company lodging a declaration satisfying the Commissioner that the share moneys will be, or have been, spent on outgoings for exploration for petroleum and the development of petroleum fields. It is also conditional upon the company forgoing any right to a deduction under Division 10AA for the expenditure.

Health Insurance Rebate. Contributions made on or after 1 July 1981 in respect of a period of cover after that date to a registered health fund for basic hospital and/or medical insurance are rebatable at the standard rate (30.67 per cent for 1982–83).

Pensioner Rebate. A limited rebate is allowable for taxpayers in receipt of an Australian social security or repatriation pension on which Australian income tax is payable. The maximum rebate of $167 for 1982–83 means that no tax will be payable on taxable income up to $5,007. The rebate is gradually reduced where taxable income exceeds $5,007 until it fully shades out at a taxable income of $6,343 for 1982–83.

Dividend Rebate. Generally a rebate of 30.67 per cent is allowable to resident individual shareholders on up to $1,000 of dividends included in taxable income and received from resident public or private companies and non-resident companies the shares in which are listed on an Australian stock exchange.

Home Loan Interest Rebate. Home loan interest payments made on or after 1 July 1982 in connection with the purchase or constuction by a resident of a sole or principal residence in Australia are rebatable at the standard rate. There are two schemes available:

(i) A rebate will apply to interest attributable to such part of the interest rate as exceeds 10 per cent per annum calculated on a reducing balance basis, in respect of the first $60,000 of a loan.

(ii) The second scheme is unlike (i) in that it is limited to first home buyers during their first 5 years of home ownership and the amount of the rebate is subject to specified ceilings.

For primary producers, whose taxable income exceeds the average of the current and preceding four years taxable incomes, a rebate is allowable in respect of taxable income derived from primary production and in respect of other taxable income where it does not exceed $5,000. Where non-primary production income exceeds $5,000, the amount deemed to be derived from primary production is the amount, if any, that remains after deducting from $5,000 the excess of that income over $5,000. In determining the rebate, an averaging benefit is calculated by subtracting from the tax on the taxable income, the tax that would be payable if an average rate appropriate to the average on the taxable incomes of the current and four previous years had applied. The rebate is that proportion of the averaging benefit that the deemed primary production taxable income bears to the total taxable income.

Effective exemption from tax

For the income years 1972–73 to 1974–75 inclusive the income of a taxpayer without dependants was exempt from income tax if it did not exceed $1,040. In 1975–76 and 1976–77 after the application of the general concessional rebate of $540 and $610 respectively to resident taxpayers, the corresponding figures were $2,518 and $2,845. In 1977–78, with the composite tax scale applying, the figure was $3,402. For 1978–79 and 1979–80 no tax was payable unless taxable income exceeded $3,893 and for 1980–81 no tax was payable unless taxable income exceed $4,041 (except in the case of certain minors). For 1981–82 no tax was payable unless taxable income exceeded $4,195 (except in the case of certain minors). In 1982–83 (except for certain minors) no tax is payable unless taxable income exceeds $4,462 in the case of a resident taxpayer or $585 in the case of most non-resident taxpayers. Special rates of tax apply where the trustee of a trust estate is liable to be assessed and to pay tax in respect of income where a presently entitled beneficiary is under a legal disability and to certain other income of a trust estate. The effect of deductions or rebates for dependants was to exempt resident taxpayers up to the incomes shown in the samples hereunder.

RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX

($)

	Taxpayer with—			
Income years ended June—	*No dependants*	*Wife*	*Wife and one child*	*Sole parent*
1978	3,402	5,335	5,335	4,761
1979	3,893	5,675	5,675	5,137
1980	3,893	5,698	5,698	5,153
1981	4,041	6,541	6,541	5,787
1982	4,195	6,788	6,788	6,007
1983	4,462	7,168	7,602	6,787

Rates of income tax on individuals

The table below shows the rates of income tax for the income year 1982–83. Rates for income years 1954–55 to 1973–74 were published in Year Book No. 60, page 590, for income years 1974–75 and 1975–76 they were published in Year Book No. 61, page 586, for income years 1976–77 and 1977–78 they were published in Year Book No. 62, pages 593 and 594, for income year 1978–79 they were published in Year Book No. 63, page 529, for income year 1979–80 they were published in Year Book No. 64, page 604 and for income year 1980–81 they were published in Year Book No. 65, page 567. For the income year 1981–82 they were published in Year Book No. 66, page 575.

The taxable income, including abnormal receipts, of *actors, artists, inventors*, etc. is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest derived from bonds, etc.

Interest derived from bonds, etc., issued between 1 January 1940 and 31 October 1968 by the Commonwealth Government, or on certain State semi-government loans issued free of State income tax, is subject to a rebate of income tax of 10 cents for each $1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

Rates of tax—individuals

The rates of tax on taxable incomes derived by both resident and non-resident individuals during the year ending 30 June 1983 (or substituted accounting period) are set out below. As from 17 August 1982 the tax-free threshold was withdrawn from non-resident taxpayers, other than those in receipt of taxable Australian social security and repatriation pensions and those who came to Australia on or before that date for a short working visit or who had made arrangements for such a visit by that date. A proportionate threshold of $585 applies to non-resident taxpayers for the 1982-83 income year.

GENERAL RATES OF TAX—RESIDENT INDIVIDUALS
1982–83 FINANCIAL YEAR, 1982–83 INCOME YEAR

Total taxable income				
Not less than—	*Not more than—*	*Tax at general rates on total taxable income*		
$	$	$		$
0	4,462	Nil		
4,462	17,894	Nil	+	30.67c for each $1 in excess of 4,462
17,894	19,500	4,119.5944	+	35.33c for each $1 in excess of 17,894
19,500	35,788	4,686.9942	+	46.00c for each $1 in excess of 19,500
35,788	. .	12,179.4742	+	60.00c for each $1 in excess of 35,788

GENERAL RATES OF TAX—NON-RESIDENT INDIVIDUALS
1982–83 FINANCIAL YEAR, 1982–83 INCOME YEAR

Total taxable income				
Not less than—	*Not more than—*	*Tax at general rates on total taxable income*		
$	$	$		$
0	585	Nil		
585	17,894	Nil	+	30.67c for each $1 in excess of 585
17,894	19,500	5,308.6703	+	35.33c for each $1 in excess of 17,894
19,500	35,788	5,876.0701	+	46.00c for each $1 in excess of 19,500
35,788	. .	13,368.5501	+	60.00c for each $1 in excess of 35,788

Income of Certain Minors

Special provisions in Division 6AA of the Assessment Act may apply to income, whether derived directly or through a trust, of a minor—a person who is under the age of 18 years at the end of the year of income. A minimum rate of tax equal to 46 per cent in 1982-83 is imposed on the eligible income of resident minors (subject to shading-in arrangements) where the income exceeds $1040. Consistent with the withdrawal of the tax-free threshold from resident individuals, the minimum income level of $1040 is not available to non-resident minors. For the 1982-83 year, tax is payable by a non-resident minor on eligible taxable income exceeding $136. Subject to shading-in arrangements, where eligible income exceeds $136 but does not exceed $1040, it is taxed at the rate of 30.67 per cent, except where the ordinary rate applicable to the eligible taxable income is greater. Where the eligible taxable income of a non-resident minor exceeds $1040, it is taxed on the same basis as that of a resident minor.

Income tax payable on specified incomes at general rates

The following table shows, for the income years 1977–78 to 1982–83, the actual income tax payable by resident taxpayers with various incomes and numbers of dependants. For 1977–78 the composite rate scale has been used, which incorporates the general concessional rebate.

COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED RESIDENT INDIVIDUAL INCOMES 1977–78 TO 1982–83 INCOME YEARS

($)

Net Income(a)	*1977–78(b)*	*1978–79(b)*	*1979–80(b)*	*1980–81(b)*	*1981–82(b)*	*1982–83(b)*
	TAXPAYER WITH NO DEPENDANTS					
$						
3,000	..	..	..	..	..	..
5,000	457.52	370.84	366.08	306.88	257.60	165.00
7,000	1,073.45	1,040.84	1,027.48	946.88	897.60	778.40
10,000	2,085.92	2,045.84	2,019.58	1,906.88	1,857.60	1,698.50
15,000	3,917.26	3,720.84	3,673.08	3,506.88	3,457.60	3,232.00
20,000	6,199.80	5,870.72	5,801.46	5,493.42	5,352.44	4,916.99
	TAXPAYER WITH DEPENDANT WIFE					
3,000	..	..	..	..	..	..
5,000	..	..	..	..	..	..
7,000	518.45	443.84	430.48	146.88	67.60	..
10,000	1,530.92	1,448.84	1,422.58	1,106.88	1,027.60	868.50
15,000	3,362.26	3,123.84	3,076.08	2,706.88	2,627.60	2,402.00
20,000	5,644.80	5,273.72	5,204.46	4,693.42	4,522.44	4,086.99

(*a*) Income remaining after allowing all deductions other than concessional deductions. (*b*) In 1976–77 previously allowable rebates for children and students were replaced by family allowances (formerly child endowment).

Income tax assessments—Individuals

The following tables show for the 1980–81 income year the number of taxpayers, taxable income, and net income tax assessed for individuals.

COMMONWEALTH INCOME TAX ASSESSMENTS(*a*): TAXABLE INDIVIDUALS BY GRADE OF TAXABLE INCOME

(Income derived in the year 1980–81)

Grade of taxable income	*Number of Taxpayers*			*Net income(b)*	*Taxable income(c)*	*Net tax*
	Males	*Females*	*Total*			
$ $				$'000	$'000	$'000
Under 5,000	167,325	254,521	421,846	1,921,230	1,888,807	63,010
5,000–5,999	162,717	216,577	379,294	2,122,561	2,082,277	167,868
	330,042	**471,098**	**801,140**	**4,043,791**	**3,971,085**	**230,878**
6,000–6,999	162,948	200,643	363,591	2,410,691	2,363,447	265,381
	492,990	**671,741**	**1,164,731**	**6,454,482**	**6,334,532**	**496,260**
7,000–7,999	168,438	185,693	354,131	2,709,961	2,655,278	360,438
	661,428	**857,434**	**1,518,862**	**9,164,443**	**8,989,810**	**856,697**
8,000–8,999	172,031	190,003	362,034	3,143,516	3,078,525	481,504
	833,459	**1,047,437**	**1,880,896**	**12,307,959**	**12,068,335**	**1,338,202**
9,000–9,999	195,623	200,638	396,261	3,849,951	3,770,255	649,779
	1,029,082	**1,248,075**	**2,277,157**	**16,157,910**	**15,838,590**	**1,987,981**
10,000–10,999	243,581	214,651	458,232	4,913,653	4,815,262	887,754
	1,272,663	**1,462,726**	**2,735,389**	**21,071,563**	**20,653,851**	**2,875,735**
11,000–11,999	273,341	184,952	458,293	5,378,893	5,267,724	1,019,128
	1,546,004	**1,647,678**	**3,193,682**	**26,450,456**	**25,921,576**	**3,894,863**
12,000–12,999	287,193	138,956	426,149	5,443,381	5,322,702	1,070,181
	1,833,197	**1,786,634**	**3,619,831**	**31,893,837**	**31,244,278**	**4,965,044**
13,000–13,999	274,069	101,891	375,960	5,189,311	5,070,253	1,053,652

COMMONWEALTH INCOME TAX ASSESSMENTS(*a*): TAXABLE INDIVIDUALS BY GRADE OF TAXABLE INCOME—*continued*

(Income derived in the year 1980–81)

Grade of taxable income	*Number of Taxpayers* *Males*	*Females*	*Total*	*Net income*(*b*)	*Taxable income*(*c*)	*Net tax*
	2,107,266	**1,888,525**	**3,995,791**	**37,083,148**	**36,314,531**	**6,018,696**
14,000-14,999	243,003	76,466	319,469	4,737,556	4,627,149	989,957
	2,350,269	**1,964,991**	**4,315,260**	**41,820,704**	**40,941,680**	**7,008,653**
15,000-15,999	217,605	59,192	276,797	4,388,303	4,286,507	939,846
	2,567,874	**2,024,183**	**4,592,057**	**46,209,006**	**45,228,187**	**7,948,499**
16,000-16,999	190,882	48,433	239,315	4,039,213	3,946,449	884,922
	2,758,756	**2,072,616**	**4,831,372**	**50,248,219**	**49,174,636**	**8,833,421**
17,000-17,999	168,627	42,533	211,160	3,775,416	3,689,594	850,739
	2,927,383	**2,115,149**	**5,042,532**	**54,023,635**	**52,864,230**	**9,684,160**
18,000-18,999	135,774	26,309	162,083	3,067,239	2,995,375	719,895
	3,063,157	**2,141,458**	**5,204,615**	**57,090,874**	**55,859,605**	**10,404,054**
19,000-19,999	112,329	19,818	132,147	2,637,680	2,574,665	644,133
	3,175,486	**2,161,276**	**5,336,762**	**59,728,554**	**58,434,270**	**11,048,187**
20,000-21,999	168,526	26,676	195,202	4,185,866	4,085,093	1,074,231
	3,344,012	**2,187,952**	**5,531,964**	**63,914,420**	**62,519,363**	**12,122,418**
22,000-23,999	110,612	15,139	125,751	2,957,127	2,884,045	802,253
	3,454,624	**2,203,091**	**5,657,715**	**66,871,547**	**65,403,408**	**12,924,672**
24,000-25,999	74,383	10,076	84,459	2,159,428	2,105,054	613,153
	3,529,007	**2,213,167**	**5,742,174**	**69,030,975**	**67,508,462**	**13,537,825**
26,000-27,999	49,780	7,086	56,866	1,574,347	1,531,909	463,739
	3,578,787	**2,220,253**	**5,799,040**	**70,605,322**	**69,040,371**	**14,001,564**
28,000-29,999	34,178	5,277	39,455	1,173,270	1,141,843	357,489
	3,612,965	**2,225,530**	**5,838,495**	**71,778,591**	**70,182,214**	**14,359,052**
30,000-34,999	51,935	11,663	63,598	2,110,241	2,057,604	675,887
	3,664,900	**2,237,193**	**5,902,093**	**73,888,832**	**72,239,819**	**15,034,940**
35,000-39,999	23,840	4,740	28,580	1,091,523	1,062,521	374,319
	3,688,740	**2,241,933**	**5,930,673**	**74,980,356**	**73,302,339**	**15,409,259**
40,000-49,999	18,638	3,781	22,419	1,016,900	989,345	384,113
	3,707,378	**2,245,714**	**5,953,092**	**75,997,255**	**74,291,684**	**15,793,371**
50,000-99,999	14,777	2,935	17,712	1,161,539	1,133,870	510,732
	3,722,155	**2,248,649**	**5,970,804**	**77,158,795**	**75,425,554**	**16,304,103**
100,000 and over	2,091	478	2,569	424,076	413,149	223,082
Total	**3,724,246**	**2,249,127**	**5,973,373**	**77,582,871**	**75,838,703**	**16,527,185**

(*a*) Assessments in respect of 1980-81 income year issued during the period 1 July 1981 to 30 June 1982. (*b*) Net income is total assessable income less total deductions for expenses incurred in gaining assessable income. (*c*) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

The above table excludes details of assessments raised to trustees. However, the following table includes all 1980-81 income year assessments issued during the period 1 July 1981 to 30 June 1982.

COMMONWEALTH INCOME TAX ASSESSMENTS: TAXABLE INDIVIDUALS BY STATE OR TERRITORY OF RESIDENCE

(Income derived in the year 1980–81)

State or Territory of Residence	*Number of taxpayers*	*Taxable income(a)*	*Net tax*
		$'000	$'000
New South Wales	2,111,301	27,303,234	6,085,507
Victoria	1,655,809	20,859,160	4,572,015
Queensland	854,745	10,589,320	2,250,809
South Australia	537,048	6,497,520	1,358,805
Western Australia	532,694	6,702,045	1,444,290
Tasmania	166,912	2,066,602	439,586
Northern Territory(*b*)	41,707	601,760	131,471
Australian Capital Territory	99,034	1,471,390	356,096
Australia	**5,999,250**	**76,091,034**	**16,638,580**

(*a*) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (*b*) Assessments issued from South Australian Office.

Partnerships and trusts

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining after allowing all deductions including expenditure incurred in gaining the income is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following tables show for the 1979–80 and 1980–81 income years numbers, total business income and net income of partnerships and trusts. Greater detail is published in the statistical supplement to the annual report of the Commissioner of Taxation and in the report itself.

PARTNERSHIPS AND TRUSTS—INCOME YEAR 1979–80 (*a*)

Item		*Partnerships*	*Trusts*	*Total*
Number		550,781	218,021	768,802
Total business income	$'000	21,528,476	6,412,029	27,940,505
Net income (*b*)	$'000	6,614,342	2,009,659	8,624,001

(*a*) Assessments issued during the period 1 July 1980 to 30 June 1982. (*b*) Total net income adjusted by subtraction of loss.

PARTNERSHIPS AND TRUSTS—INCOME YEAR 1980–81 (*a*)

Item		*Partnerships*	*Trusts*	*Total*
Number		517,766	219,429	737,195
Total business income	$'000	21,242,985	7,523,546	28,766,531
Net income(*b*)	$'000	6,128,248	2,237,391	8,365,639

(*a*) Assessments issued during the period 1 July 1981 to 30 September 1982. (*b*) Total net income adjusted by subtraction of loss.

Taxes on income—companies

For taxation purposes companies are divided into two main groups—public and private. A company is regarded as a public company if, broadly, its shares are on the official list of a stock exchange—in Australia or elsewhere and it is not capable of being controlled by relatively few individuals—or it is a co-operative, non-profit or mutual life insurance company or a Government body established for public purposes. A subsidiary of a public company is itself classed as a public company, subject to its meeting certain tests specified in the Income Tax Assessment Act. A company that is not a 'public' company is classified as a 'private' company. Both public and private companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

Rates of tax. The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1970–71 to 1981–82 are shown in the following table.

RATES OF INCOME TAX: COMPANIES, 1970–71 TO 1981–82 INCOME YEARS

(Cents per $)

	Resident private company			*Resident public company(a)*		*Non resident company*			
	On taxable income		*Additional tax on undistributed income*	*On taxable income*		*On dividends income*		*On other income*	
Income years ended 30 June	*Up to $10,000*	*On remainder*		*Up to $10,000*	*On remainder*	*Up to $10,000*	*On remainder*	*Up to $10,000*	*On remainder*
1971 and 1972 . . .	37.5	42.5	50	47.5	47.5	42.5	47.5	47.5	47.5
1973	45.0	45.0	50	47.5	47.5	47.5	47.5	47.5	47.5
1974	45.0	45.0	50	45.0	45.0	45.0	45.0	45.0	45.0
1975 and 1976 . . .	42.5	42.5	50	42.5	42.5	42.5	42.5	42.5	42.5
1977-1981	46.0	46.0	50	46.0	46.0	46.0	46.0	46.0	46.0

(*a*) Excludes co-operative, non-profit and life insurance companies.

For the income year ended 30 June 1974 the rate for companies other than friendly society dispensaries was 45 per cent, except that for the first $10,000 of taxable income of co-operative and non-profit companies (other than friendly society dispensaries) the rate was 42.5 per cent. The rate for friendly society dispensaries was 37.5 per cent.

For the income years ended 30 June 1975 and 1976 the rate for companies other than friendly society dispensaries was 42.5 per cent and for friendly society dispensaries it was 37.5 per cent.

For the income years ended 30 June 1977 to 1982 the rates were 46 per cent and 41 per cent respectively. Tax exemption levels for these years are set out below.

A non-profit company is not liable to income tax unless the taxable income exceeds $416. Where the non-profit company is a friendly society dispensary and the taxable income does not exceed $2,311 the maximum amount payable is 50 per cent of the excess over $416 less any rebate or credit to which the company is entitled. Where the taxable income of a non-profit company other than a friendly society dispensary does not exceed $2,542, the tax payable by the company is limited to 55 per cent of the amount by which the taxable income exceeds $416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is $1 or more.

Non-resident companies are also liable to additional tax at the rate of 5 per cent of the company's reduced taxable income. Reduced taxable income means the amount remaining after deducting from taxable income net dividends included in assessable income and certain amounts relating to overseas ships, film royalties, insurance premiums and reinsurance income.

Details in respect of company income tax assessments for the 1979–80 income year are shown in the following table.

COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES BY GRADE OF INCOME AND OFFICE OF ASSESSMENT

(Income derived in the year 1979–80)

Grades of taxable income(a) ($) and office of assessment	*Taxable (b)*			*Non-taxable*		
	Companies	*Taxable income (a)*	*Net income tax assessed(c)*	*Companies*	*Taxable income (a) (d)*	*Loss(e)*
	No.	$'000	$'000	No.	$'000	$'000
Loss for year	–	–	–	73,726	–	1,168,674
Nil	–	–	–	55,211	–	–
1– 1,999	29,622	14,921	6,392	3,924	2,886	–
2,000– 9,999	17,418	89,746	36,814	4,463	23,142	–
10,000– 19,999	8,121	116,330	47,222	1,777	25,280	–
20,000– 39,999	6,967	199,218	80,874	1,201	33,728	–
40,000– 99,999	6,335	398,395	164,071	800	48,184	–
100,000– 199,999	2,938	411,484	169,031	246	33,881	–
200,000– 399,999	1,868	522,996	213,813	155	43,536	–
400,000– 999,999	1,437	897,128	354,176	96	53,569	–
1,000,000–1,999,999	684	955,388	358,431	41	58,662	–
2,000,000 and over	843	9,208,378	3,170,906	43	386,563	–
New South Wales	38,488	4,509,626	1,495,275	66,046	297,381	524,308
Victoria	18,757	6,038,894	2,268,854	33,609	293,783	383,808
Queensland	7,605	1,450,920	539,916	12,122	42,540	79,656
South Australia	5,318	294,386	114,357	13,991	32,824	70,314
Western Australia	3,114	377,819	132,606	10,068	24,902	74,958
Tasmania	1,347	91,799	35,407	2,676	5,398	23,837
Northern Territory	275	10,031	4,040	686	521	3,636
Australian Capital Territory	1,329	40,510	11,274	2,485	12,082	8,156
Total	**76,233**	**12,813,984**	**4,601,729**	**141,683**	**709,431**	**1,168,674**

(*a*) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (*b*) The figures are deficient in that detailed statistics of approximately 3700 assessments of taxable private companies with net tax of approximately $42 million were not available for inclusion in the table. (*c*) Excludes additional tax on the undistributed income of private companies. (*d*) Net tax assessed is nil because of rebates. (*e*) Not included in the figures shown for taxable income.

Yield of income taxes

Income taxes collected. The following table shows the net amounts of taxes collected and the proportions of the several components over recent years.

COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1976–77 TO 1981–82

Source of income tax	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
NET AMOUNTS COLLECTED ($'000)						
Individuals—						
Instalments—salaries and wages	8,528,863	9,638,786	10,397,606	12,160,308	14,120,691	17,417,317
Other payments	2,524,781	2,490,216	2,406,212	2,879,787	3,422,561	3,806,998
Companies	2,824,459	3,095,321	3,036,520	3,406,479	4,694,691	5,052,697
Withholding tax	96,377	117,852	114,069	141,130	160,965	205,098
Total	**13,974,480**	**15,342,175**	**15,954,407**	**18,587,704**	**22,398,908**	**26,482,110**
PERCENTAGES						
Individuals—						
Instalments—salaries and wages	61.03	62.83	65.17	65.42	63.04	65.77
Other payments	18.07	16.23	15.08	15.49	15.28	14.38
Companies	20.21	20.18	19.03	18.33	20.96	19.08
Withholding tax	0.69	0.76	0.72	0.76	0.72	0.77
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Refunds of revenue. Income tax collections, as previously shown are net amounts after refunds of revenue made in the course of the year. Refunds are of two types: those charged to special appropriations under authority of the Income Tax Assessment Act and those charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals and superannuation funds during the collection years 1976–77 to 1981–82 were: 1976–77, $1,501,555,000; 1977–78, $1,218,225,000; 1978–79, $1,407,257,000; 1979–80, $1,478,387,000; 1980–81, $1,560,519,000; and 1981–82, $1,850,765,000.

Estate duty

Prior to 1 July 1979 estate duty was levied under the *Estate Duty Assessment Act* 1914 and was assessed on the net value of the estate less a statutory exemption. In respect of estates of persons who died after 21 November 1977 no duty was payable on that part of the estate which passed to or for the benefit of the deceased persons' widow or widower, children, grandchildren, parents or grandparents. Duty is not payable on estates of any person dying on or after 1 July 1979. For estates of persons who died before 1 July 1979, where no part of the estate passed to the relatives mentioned above, duty was payable on the net value less statutory exemption as follows:

- for qualifying estates of deceased primary producers—$24,000
- for other estates—$20,000

decreasing by $2 for every $8 by which the value of the estate exceeds $24,000 or $20,000 as the case may be.

Additional information concerning a rural property rebate and higher exemption levels for primary producers, special exemptions for defence personnel and a quick succession rebate is given in Year Book No. 63, page 534.

The rates of duty remained unchanged from1941 and increased as the value of the estate for duty increased, as follows: did not exceed $20,000, 3 per cent; $20,001 to $40,000, 3 per cent to 6 per cent; $40,001 to $240,000, 6 per cent to 26 per cent; $240,001 to $1,000,000, 26 per cent to 27.9 per cent; $1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed for recent assessment years are given in the following table.

COMMONWEALTH ESTATE DUTY ASSESSMENTS

		1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Estates	No.	15,154	9,828	6,449	1,767	218
Gross value as assessed	$'000	1,443,967	980,304	n.a.	n.a.	n.a.
Deductions(*a*)	"	356,792	268,164	n.a.	n.a.	n.a.
Statutory exemptions	"	344,482	175,141	n.a.	n.a.	n.a.
Dutiable value	"	742,693	536,999	n.a.	n.a.	n.a.
Net duty assessed	"	99,050	76,301	41,434	10,434	1,984
Average dutiable value	$	49,010	54,640	n.a.	n.a.	n.a.
Average duty assessed per estate	$	6,536	7,764	6,425	5,905	9,100

(*a*) Debts, Exempt Estate and State Probate Succession Duties.

Gift duty

Prior to 1 July 1979 the *Gift Duty Act* 1941 and the *Gift Duty Assessment Act* 1941 imposed a gift duty on gifts which were defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. Both the donor and the donee were liable to furnish a return, and both were jointly and severally liable for payment of the duty. However, if a return was furnished by the donor, the donee is relieved of this obligation. Under the *Gift Duty Assessment Act* 1978, gifts to the donor's spouse, children, grandchildren, parents or grandparents made after 21 November 1977 were not subject to duty. Gift duty is not levied on any gifts made after 1 July 1979.

Certain exemptions from duty were provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth Government or a State; and small gifts not exceeding $100.

The rate of gift duty applicable to any particular gifts was fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as defined did not exceed $10,000 no duty was payable. The rates of duty that applied to 30 June 1979 were (*a*) $10,001 to $20,000, 3 per cent provided that the gift duty payable did not exceed one half of the amount by which the gift exceeded $10,000 or a proportionate amount where more than one gift is involved; (*b*) $20,001 to $40,000, 3 per cent to 6 per cent; (*c*) $40,001 to $240,000, 6 per cent to 26 per cent; (*d*) $240,001 to $1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for recent assessment years are given in the following table.

COMMONWEALTH GIFT DUTY ASSESSMENTS

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Assessments	No.	7,480	4,352	995	875	233	27
Value as assessed	$'000	187,085	103,058	95,738	n.a.	n.a.	n.a.
Duty assessed	"	11,711	5,934	22,032	4,985	311	150

Customs duties

A description of the Australian Customs Tariff System is given in Chapter 24, Overseas Transactions. Details of duties collected on the import of commodities classified in accordance with the 'Brussels Nomenclature' are given in the following table.

GROSS CUSTOMS DUTIES ON IMPORTS ACCORDING TO BRUSSELS TARIFF DIVISIONS
($'000)

Brussels Tariff Division	*Source of receipts*	*1980–81*	*1981–82*	*1982–83*
1	Live animals; animal products	966	1,379	1,408
2	Vegetable products	2,920	3,938	3,069
3	Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes .	1,799	2,790	3,228
4	Prepared foodstuffs; beverages, spirits and vinegar; tobacco .	248,845	271,806	287,468
5	Mineral products	4,694	4,207	5,743
6	Products of the chemical industry and allied industries . .	50,111	59,301	59,550
7	Artificial resins and plastic materials, cellulose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof	100,547	118,672	110,872
8	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of gut (other than silkworm gut) . .	12,716	17,474	14,783
9	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork	23,157	23,853	20,447
10	Paper-making material; paper and paperboard and articles thereof	36,225	46,671	48,640
11	Textiles and textile articles	214,848	248,012	236,273
12	Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts therefor; prepared feathers and articles made therewith; artificial flowers; articles of human hair; fans	48,292	53,876	60,261
13	Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware	37,994	45,206	40,323
14	Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin	10,268	11,977	10,682
15	Base metals and articles of base metal	100,382	128,529	119,206
16	Machinery and mechanical appliances; electrical equipment; parts therefor	391,660	472,496	438,673
17	Vehicles, aircraft, and parts therefor; vessels and certain associated transport equipment	424,209	467,781	465,454

GROSS CUSTOMS DUTIES ON IMPORTS ACCORDING TO BRUSSELS TARIFF DIVISIONS—*continued*

($'000)

Brussels Tariff Division	*Source of receipts*	*1980–81*	*1981–82*	*1982–83*
18	Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and reproducers, magnetic; parts therefor	37,755	46,777	62,509
19	Arms and ammunition; parts therefor	605	859	668
20	Miscellaneous manufactured articles	59,395	73,029	72,293
21	Works of art, collectors' pieces and antiques	19,642	3,751	2,043
22	Primage	5,681	2,336	90
	Total customs duties and primage	**1,832,712**	**2,104,720**	**2,063,685**

The *net* receipts of custom duties into consolidated revenue fund for these years are 1980–81, $1,827,031,000; 1981–82, $2,102,501,000; and 1982–83, $2,066,023,000.

Customs duties on imports as recorded in the Financial Statements prepared by the Minister for Finance for these years are: 1980–81, $1,799,507,666; 1981–82, $2,059,706,249; and 1982–83, $2,035,662,743.

Excise duties

Details of duties collected in relation to the production of specific commodities are given in the following table:

COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF GROSS REVENUE

($'000)

Source of revenue	*1980–81*	*1981–82*	*1982–83*
Beer	994,994	1,005,866	1,090,761
Spirits, including liqueurs, etc.	111,768	119,606	112,649
Tobacco (manufactured), snuff	21,203	19,737	22,328
Cigars and cigarettes	687,084	706,883	773,711
Aviation gasoline—for use in aircraft	4,589	5,236	4,683
Aviation gasoline—other	1	—	873
Other gasoline	760,297	776,914	897,421
Aviation turbine kerosene	48,138	50,088	48,016
Kerosene, n.e.i.	1	84	52
Diesel fuel	116,819	130,747	412,510
Gasoline—commercial motor spirit/ethanol blends	6	21	1
Playing cards	57	86	n.p.
Cigarette tubes, paper and papers	590	695	n.p.
Matches	1,342	1,365	n.p.
Wine—other than table wine (excise item 16)	1	—	—
Petroleum and liquid petroleum gas (excise item 17)	3,059,822	3,274,043	3,518,000
Coal	11,663	13,012	23,599
Other and undistributed excise revenue	—	85	2,001
Total Gross Excise Duties	*5,818,374*	*6,104,467*	*6,906,605*
Total Gross Customs, Primage and Excise Duties	**7,651,086**	**8,209,187**	**8,970,289**
Total Customs, Primage and Excise Refunds and Drawbacks	82,776	82,820	100,391

Statistics of the value of duty included in the price of petroleum products purchased by Commonwealth Government departments and subsequently credited to those departments by the Department of Finance are not available. The *net* receipts into consolidated revenue fund for these years is: 1980–81, $5,818,374,000; 1981–82, $6,104,467,000; and 1982–83, $6,906,605,000. The quantities of commodities on which excise duty was paid are given in chapter 24, Overseas Transactions, page 620. Commonwealth excise received, as recorded in the Financial Statement prepared by the Minister for Finance during these years are: 1980–81, $5,833,168,483; 1981–82 $5,993,155,448; and 1982–83, $6,806,654,140.

Primary production taxes and charges

The following section shows rates of charges and levies on primary production as at 1 September 1983. Further information is given in Chapter 13, Agricultural Industries. Expenditure on research funded from industry levies is usually matched dollar for dollar by the Commonwealth Government.

Export Inspection Charges. A charge is imposed on products exported from Australia, or in certain cases for which an export permit has been issued. The Live-stock Slaughter – Export Inspection Charge is imposed on live-stock slaughtered at export works. The aim of imposing these charges is to recoup about half of the cost of providing export inspection services. The charges imposed are as follows:

Animal Export Inspection Charges. Export inspection charges for animals were introduced on 1 July 1983. Charges are made under the *Quarantine Act* 1908 to recover a proportion of the cost to the Commonwealth of inspection of animals for export for which a certificate of health is issued. Charges, which vary according to the type of animal exported, are incorporated in Schedules to the Quarantine (Animals) Regulations, copies of which are available from branches of the A.G.P.S.

Dairy Products—Export Inspection Charge. Under the *Dairy Products (Export Inspection Charge) Act* 1982. The rates are:

Category	*Rate per tonne*
	$
Butter packed in bulk or pat form	2.50
Butter packed otherwise than in bulk or pat form	1.00
Butterfat products other than butter	1.00
Cheese packed in bulk	2.50
Cheese packed otherwise than in bulk	1.00
Concentrated, condensed and dried milk	0.50
All other dairy products	1.00

Dried Fruit—Export Inspection Charge. Under the *Dried Fruit (Export Inspection Charge) Act* 1981, a charge is imposed on all dried fruit exported from Australia to recoup about half the cost of export inspection incurred by the Commonwealth Government. The operative charge is $5.50 per tonne.

Edible Oils—Export Inspection Charge. Imposed under the *Edible Oils (Export Inspection Charge) Act* 1982. The rates are: $1.00 per tonne of margarine and $1.00 per tonne of edible oils other than margarine.

Eggs—Export Inspection Charge. Imposed under the *Eggs (Export Inspection Charge) Act* 1982. The rates are $11.00 per 1,000 dozen eggs in shell and $8.00 per tonne of eggs other than in shell.

Fish—Export Inspection Charge. Under the *Fish (Export Inspection Charge) Act* 1981, a charge is imposed on fish for which an export permit has been issued. The charges are:

- Rock lobster—3.9 cents per kilogram
- All other shellfish except oysters, squid, cuttlefish and octopus—2.5 cents per kilogram
- All other fish except oysters in the shell or half shell—0.34 cents per kilogram
- Oysters in the shell or half shell—1.0 cents per dozen.

Grain Export Inspection Charge. Under the *Grain (Export Inspection Charge) Act* 1979 imposed on exports of wheat, oats, barley and sorghum. The charge is 9.6c per tonne on bulk grain, 40c per tonne bagged grain and grain in containers.

Live-stock Slaughter—Export Inspection Charge. Charge for the inspection of live animals for export. Imposed by the Quarantine (Animals) Regulations under the *Quarantine Act* 1968. Overall responsibility for the administration of this legislation lies with the Commonwealth Department of Health.

Other charges

Export Inspection—Overtime Recoveries—Meat. Under the *Customs Act* 1901 and the *Commerce (Trade Descriptions) Act* 1905, a charge at the rate prescribed in the Export Meat Regulations is imposed on export meat-works to recover fully the cost of providing export meat inspection services outside normal hours.

Export Inspection Charge—Overtime Recoveries—Products Other than Meat. Fees are levied to recover the cost of providing export inspection, outside normal hours, for a number of products including field and horticultural crops, fish and dairy products. The fees are prescribed by the *Export Regulations* to the *Commerce (Trade Descriptions) Act*, 1905 and *Customs Act* 1901.

Fishing Licences and Charges. Under the *Fisheries Act* 1952 and the *Continental Shelf (Living Natural Resources) Act* 1968, domestic and foreign boats and crews may be licensed to fish in the Australian Fishing Zone. Other charges such as access fees for foreign countries are also levied under the Fisheries Act. The rate of licence fees is set out in the Fisheries Regulations and Continental Shelf (Living Natural Resources) Regulations.

Export Inspection Charges—Miscellaneous. By arrangement, Commonwealth inspectors are provided to (i) abattoirs that are not registered export establishments to inspect meat for domestic consumption, (ii) State Dried Fruit Boards to inspect dried fruit for domestic use, and to (iii) Australian Wheat Board for the issue of quality certificates.

The inspection charge in those cases is arrived at by agreement between the parties concerned.

Wool Inspection Fees. Under the *Wool Industry Act* 1972, fees are imposed on the inspection of wool to recoup about half the cost of operating the Australian Wool Measurement Standards Authority. A fee for registering a wool sampling site is set at $100 and is payable once only. The fee for providing pre-sale test certificates in respect of samples drawn at registered sites is currently 62 cents per certificate.

Research, Promotion, Stabilisation and Equalisation Levies and Charges

Apple and Pear Levy. The *Apple and Pear Levy Act* 1976 imposes a levy on the production and sale of apples and pears in Australia excluding fruit sent for export and pears delivered for the manufacture of canned fruit. The rates of the levy are: fresh market 9 cents per box; juicing 90 cents per tonne; processing $1.80 per tonne.

The *Apple and Pear Export Charge Act* 1976 provides for the imposition of a charge on apples and pears exported from Australia. The rate of charge is 9 cents per box.

Monies collected from both the levy and the export charge are used to fund the operations of the Australian Apple and Pear Corporation.

Barley Research Levy. The *Barley Research Levy Act* 1980 imposes a levy on barley delivered for sale. The levy is disbursed for research by State barley research committees. The operative rate of levy is 30 cents per tonne.

Canned Fruits Levy. The *Canned Fruits Levy Act* 1979 imposes a levy on the production of canned fruits in Australia.

The operative rates are:

Containers not exceeding 150 grams—1.375 cents/doz. containers.

Containers exceeding 150 grams but not exceeding 320 grams—2.75 cents/doz. containers.

Containers exceeding 320 grams but not exceeding 490 grams—5.5 cents/doz. containers.

Containers exceeding 490 grams but not exceeding 680 grams—8.25 cents/doz. containers.

Containers exceeding 680 grams—11.4 cents/doz. containers plus 6.6 cents/doz. containers for each 450 grams by which the gross weight of the container exceeds 900 grams.

The funds raised are to be used to finance the operation of the Australian Canned Fruits Corporation.

Cotton Research Levy. Under the *Cotton Levy Act* 1982 a levy is imposed on the production of cotton. The levy will be used to fund research programs. The operative rate of levy is to be $1 per 225 kg of raw cotton.

Wool Tax. The *Wool Tax Acts* 1964 (Nos 1 to 5). As amended, impose a levy of 8 per cent on the gross value of shorn wool sold of which 5 per cent is levied for the market support activities of the Australian Wool Corporation and 3 per cent to provide the growers' contribution towards wool research (0.5 per cent) and promotion (2.5 per cent).

Dairy Industry Stabilisation Levy. The Dairy Industry Stabilisation Levy Act imposes a levy on the production of butter, butteroil, ghee, various milk powders, casein, caseinates and certain varieties of cheese. The levy is collected on products sold on the domestic market or used in the manufacture of other products. Basically the rate of levy is fixed at the difference between the domestic market return and the assessed average export return.

The purpose of the levy is to protect the domestic market through the equalisation of returns to manufacturers.

Dairying Research and Promotion Levy. The Dairying Industry Research and Promotion Levy Act 1972 provides for the imposition of a levy on all milk produced and sold in Australia. The Act provides for the levy to be payable by dairy farmers either on a whole milk or butterfat basis. Moneys collected from the levy finance the administration and promotional activities of the Australian Dairy Corporation and the industry contribution to the research programme recommended by the Australian Dairying Research Committee. The Dairying Industry Research and Promotion Levy Regulations prescribe levies of either 17.0 cents per 100 litres of whole milk or 425 cents per 100 kilograms of butterfat.

Dried Fruits Levy. The *Dried Fruits Act* 1971 imposes a levy on dried fruits of a season received for packing in order to fund industry research programmes. The operative rates of levy are for dried vine fruits $1.00 per tonne, dried tree fruits $5.00 per tonne and dried plums $2.50 per tonne.

Dried Fruits Export Charges. The *Dried Fruits Export Charges Act* 1924 imposes a levy of $7.00 per tonne on the export of dried currants, sultanas and raisins. The funds are used to finance the Australian Dried Fruits Corporation.

Dried Vine Fruits Equalisation Levy. The *Dried Vine Fruits Equalisation Levy Act* 1978 imposes a levy on domestic sales of dried vine fruit which is equal to the difference between the assessed returns per tonne from the domestic market and the assessed average returns per tonne from export. The purpose of the levy is to facilitate the equalisation of returns to producers from all markets. Because of the buoyant nature of the export market for dried vine fruit, no levies applied in either the 1979, 1980 or 1981 seasons. However, these levies applied for the 1982 and 1983 seasons. In 1982 the rates were $492/tonne for sultanas, $432/tonne for currants and $520/tonne for raisins. 1983 season figures, $650/tonne for sultanas, $570/tonne for currants, no levy applied to raisins.

Honey Export Charge. The *Honey Export Charge Act* 1973 imposes a charge of 0.75 cents per kilogram on honey exports.

The funds are used to finance the operations of the Australian Honey Board and provide the industry's contribution to research.

Honey Levy. The *Honey Levy Acts* (Nos 1 & 2) 1962 impose a levy of 2.05 cents per kilogram on honey sold for domestic consumption.

Livestock Export Charge. The *Livestock Export Charge Act* 1977 imposes charges which apply to all cattle, buffaloes, sheep, lambs and goats exported live from Australia. The funds are allocated to the Australian Meat and Livestock Corporation (AMLC), the Australian Meat Research Committee (AMRC) and for disease eradication.

The charges are:

	Cents/Head			
	AMLC	*AMRC*	*Disease eradication*	*Total*
Cattle, buffaloes	120	35	400	555
Sheep, lambs, goats	12	3.33	—	15.33

Livestock Slaughter Levy. The *Livestock Slaughter Levy Act* 1961 imposes a levy which is payable on all cattle, calves, bobby calves, sheep, lambs, goats and buffaloes slaughtered for human consumption. The funds are used by the Australian Meat and Livestock Corporation (AMLC) for marketing and promotion, by the Australian Meat Research Committee (AMRC) for production and economic research and by the CSIRO for meat processing research. The Slaughter Levy also provides the funds for the eradication of brucellosis and tuberculosis in cattle and buffaloes.

The levies are:

	Cents/Head				
	AMLC	*AMRC*	*CSIRO processing research*	*Disease eradication*	*Total*
Cattle, buffaloes	120	35	3	400	558
Calves	43.2	9	1.4	133	186.6
Bobby calves	12	2.5	0.3	40	54.8
Sheep, lambs	14	3.33	0.3	—	17.63
Goats	14	3.33	0.3	—	15.63

COMMONWEALTH PRIMARY PRODUCTION TAXES

($'000)

	1979–80	*1980–81*	*1981–82*	*1982–83*
Apple and pear export charge	197	216	183	182
Apple and pear export duty	11	444	—	—
Apple and pear levy	627	604	716	978
Barley research levy	—	314	429	289
Butterfat levy	—	—	—	—
Canned fruit export charge (replaced by canned fruit levy 1.1.80)	133	718	863	1,122
Canning fruit charge	99	58	52	—
Cotton Research Levy	—	—	—	120
Dairy industry stabilization levy	93,549	82,339	79,711	93,924
Dairying research and promotion levy	5,689	6,119	7,218	9,372
Dried fruits export charge	189	236	193	403
Dried fruits levy	90	119	87	120
Dried vine fruits levy	—	1,187	—	—
Dried vine fruit equalisation levy	—	—	688	10,432
Honey export charge	56	51	93	115
Honey levy	200	233	241	263
Livestock slaughter levy—				
Research marketing component—				
Cattle, calves, bobby calves	7,539	7,172	7,155	9,939
Buffaloes	—	18	23	42
Sheep, lambs	3,165	3,261	2,843	4,246
Goats	47	40	40	47
Disease eradication component	20,453	21,066	21,038	27,427
Livestock export charges—				
Research marketing component-				
Cattle	46	118	110	115
Buffaloes	—	—	—	5
Sheep, lambs	645	572	654	900
Goats	—	—	—	10
Disease eradication component	128	346	332	342
Pig slaughter levy	769	1,086	2,043	2,821
Oil seeds research levy	409	277	276	230
Meat chicken levy	234	235	211	233
Poultry industry levy	17,834	20,939	20,805	20,194
Tobacco charge	504	519	539	624
Wheat export charge	—	30,000	—	—
Wheat tax	3,085	2,012	3,108	1,967
Wheat levy	—	38,318	25,147	38,866
Refunds of wheat export charge and wheat levy	-4,390	-60,536	-38,733	-61,074
Wine grapes charges (replaced by wine grapes levy 1.7.79)	1,174	65	11	1
Wine grapes levy	—	1,224	1,065	1,225
Wool tax	121,400	132,864	138,492	142,080
Refunds of 5% additional wool tax	—	—	-41,524	-44,090
Total	**273,880**	**292,217**	**234,109**	**263,471**

Pay-roll tax

Commonwealth pay-roll tax came into operation on 2 May 1941 and provided for the imposition of a tax on wages paid or payable in respect of any period of time occurring after 30 June 1941. The tax was payable by employers on all wages and salaries paid or payable in excess of a general exemption. The rate of tax, 2.5 per cent, was not changed after its inception, but the general exemption was increased over the years from $173.33 to $1,733.33 per month ($2,080 per annum to $20,800 per annum).

From 1 September 1971, in accordance with an agreement between the Commonwealth Government and the States following the June 1971 Premiers' Conference, the Commonwealth Government vacated the pay-roll tax field in favour of the States. It continued, however, to impose pay-roll tax in the Australian Capital Territory and the Northern Territory. The laws relating to pay-roll tax in the Territories are the *Pay-roll Tax (Territories) Assessment Act* 1971 and the *Pay-roll Tax (Territories) Act* 1971.

From 1 December 1974 the rate of tax payable in the Territories has been 5 per cent with a statutory exemption of wages up to $1,733.33 per month ($20,800 per annum) or a proportion of that amount in the case of an employer who is an employer also in a State.

The *Pay-roll Tax (Territories) Assessment Act* 1976 raised the level of the general exemption from pay-roll tax in the Territories from $20,800 to $48,000 per annum with effect from 1 January 1977. However the exemption was reduced by $2 for every $3 by which the annual pay-roll exceeded $48,000. The maximum general exemption was increased to $60,000 from 1 July 1978 under the *Pay-roll (Territories) Assessment Amendment Act* 1978. Commonwealth pay-roll tax in the Northern Territory was terminated from 1 July 1978 by the *Pay-roll Tax (Territories) Assessment Amendment Act (No. 2)* 1978 giving the Territory the right to levy its own pay-roll tax.

The *Pay-roll Tax (Territories) Assessment Amendment Act* 1979 increased the maximum exemption level in the Australian Capital Territory to $66,000 with effect from 1 January 1979. The exemption level was further increased to $72,000 with effect from 1 January 1980 under the *Pay-roll Tax (Territories) Assessment Amendment Act* 1980. Phasing out remains at $2 for each $3 by which the annual wages payable exceed the maximum exemption level.

Gross collections of pay-roll tax in 1980–81 and 1981–82 amounted to $17,007,851 and $19,319,922 respectively.

Gross operating surplus of public enterprises

The *gross operating surplus* of public *trading* enterprises is the excess over working expenses of total revenue from charges before providing for capital consumption and other costs of capital (i.e. interest, debt redemption). *Financial* enterprises do not charge directly, at least not in full, for the services they render; that expenditure is largely financed by net receipts of interest and other transfer income. By convention, the output of these enterprises is valued at cost, so that no operating surplus is recorded in their production accounts. The profits of these enterprises are attributable to their property income. *Income* (including depreciation) of public financial enterprises is therefore arrived at after deducting interest paid and working expenses (i.e. net current expenditure on goods and services) from total receipts of interest and non-dwelling rent.

In the following table the revenue, working expenses and gross operating surplus of public trading enterprises are shown; public financial enterprises are reflected simply on the basis of their income (including depreciation). Further information relating to the more important of these enterprises may be found in the chapters dealing with banking, housing, railways, electric power generation, etc.

COMMONWEALTH AUTHORITIES: PUBLIC TRADING ENTERPRISES(*a*): REVENUE, WORKING EXPENSES AND GROSS OPERATING SURPLUS, CLASSIFIED BY INDUSTRY

($ million)

Industry	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
REVENUE						
Manufacturing	54.7	58.5	74.3	65.2	68.5	
Electricity	96.2	105.1	100.6	105.6	129.7	
Water supply, sewerage and drainage	9.6	12.5	12.9	14.2	16.0	
Transport and communication—						
Air transport	808.7	929.7	1,074.3	1,336.4	1,467.5	
Rail transport	122.9	121.7	131.4	157.6	180.7	
Sea transport	282.6	319.4	372.7	422.9	464.2	
Urban transit systems	16.8	15.8	10.2	10.7	18.6	
Pipelines	2.8	11.7	18.1	23.4	23.3	n.y.a.
Communication	2,314.7	2,521.3	2,811.9	3,121.1	3,564.1	
Total transport, etc.	*3,548.4*	*3,919.5*	*4,418.7*	*5,072.4*	*5,718.5*	
Commerce	149.6	249.8	360.4	199.1	149.1	
Property and business services—						
Housing	22.6	27.6	25.6	27.9	31.3	
Other	25.7	36.5	38.7	43.5	45.8	
Total property, etc.	*48.3*	*64.1*	*64.3*	*71.4*	*77.1*	
Community, social and personal services	22.7	28.1	41.1	52.7	61.5	
Total revenue	**3,929.5**	**4,437.6**	**5,072.3**	**5,580.6**	**6,220.3**	**7,457.2**
WORKING EXPENSES(*b*)						
Manufacturing	52.4	55.6	68.6	60.1	63.0	
Electricity	48.3	56.9	39.7	48.4	68.5	
Water supply, sewerage and drainage	6.1	7.3	5.8	6.8	9.2	
Transport and communication—						
Air transport	722.7	833.8	969.2	1,267.5	1,402.5	
Rail transport	170.1	184.9	187.0	205.2	225.7	
Sea transport	231.2	260.4	312.8	377.7	410.5	
Urban transit systems	19.1	20.0	16.0	19.2	26.9	
Pipelines	1.4	3.4	3.1	3.7	4.7	n.y.a.
Communication	1,456.4	1,600.6	1,769.8	1,989.2	2,311.0	
Total transport, etc.	*2,601.0*	*2,903.0*	*3,258.0*	*3,862.6*	*4,381.4*	
Commerce	160.7	255.0	348.6	189.3	148.4	
Property and business services—						
Housing	24.4	28.8	30.1	33.4	38.7	
Other	23.8	35.0	37.0	42.3	44.5	
Total property, etc.	*48.2*	*63.8*	*67.1*	*75.6*	*83.2*	
Community, social and personal services	19.1	24.0	33.5	42.9	52.1	
Total working expenses	**2,935.8**	**3,365.6**	**3,821.4**	**4,285.7**	**4,805.8**	**5,807.3**
GROSS OPERATING SURPLUS						
Manufacturing	2.3	2.9	5.6	5.0	5.5	4.6
Electricity	47.9	48.2	60.9	57.3	61.2	74.5
Water supply, sewerage and drainage	3.5	5.2	7.0	7.4	6.8	9.8
Transport and communication—						
Air transport	86.0	95.9	105.1	68.9	65.0	76.6
Rail transport	–47.2	–63.2	–55.5	–47.6	–45.0	–56.3
Sea transport	51.4	59.0	60.0	45.2	53.7	45.1
Urban transit systems	–2.4	–4.1	–5.8	–8.5	–8.3	–8.8
Pipelines	1.4	8.3	15.0	19.7	18.6	25.3
Communication	858.2	920.7	1,042.1	1,131.9	1,253.1	1,442.4
Total transport, etc.	*947.5*	*1,016.5*	*1,160.7*	*1,209.8*	*1,337.1*	*1,524.3*
Commerce	–11.1	–5.3	11.8	9.8	0.8	35.4
Property and business services—						
Housing	–1.8	–1.2	–4.5	–5.5	–7.4	–8.2
Other	1.8	1.6	1.7	1.2	1.3	1.4
Total property, etc.	—	*0.4*	*–2.9*	*–4.3*	*–6.1*	*–6.8*
Community, social and personal services	3.6	4.0	7.6	9.8	9.3	8.1
Total gross operating surplus	**993.8**	**1,072.0**	**1,250.9**	**1,294.9**	**1,414.6**	**1,649.9**

(*a*) Excludes Northern Territory public trading enterprises from 1978–79. (*b*) Excludes depreciation and interest charges.

STATE AUTHORITIES

The State authorities dealt with in this section include the central government of each State, statutory bodies created by or under State legislation to carry out activities on behalf of the central government, and incorporated organisations in which individual State governments have a controlling interest.

The transactions of many of the State authorities are itemised in State Consolidated Revenue Funds or in Trust Funds, so that a satisfactory coverage of their transactions can be obtained from a detailed analysis and reclassification of the published accounts whose receipts and payments are summarised in the statement of Treasury balances for each State. The remaining statutory bodies and other publicly owned or controlled organisations maintain accounts entirely, or largely, separate from the public accounts, although there may be transactions between them and State governments (such as advances and capital contributions, interest and dividends, and votes for running expenses and capital works) which would affect the public accounts. The accounting reports of this group of organisations have to be collected and analysed in order to present a complete statement of the transactions of State authorities--or at least methods of analysis need to be adopted which adequately reflect their transactions so that they are, in principle, covered by the statistics.

In the figures which follow in this section, all expenditure by State central government authorities on certain institutions, whether direct (e.g. new building charged to Loan Fund) or indirect by way of current or capital grants to the bodies administering them, has been treated as final expenditure on goods and services by State authorities; fees and gifts from persons or private businesses to these institutions are not included, nor is the expenditure of the institutions from their own resources. Universities and hospitals are particular examples of organisations for which this practice has been adopted.

Many of these State authorities have been granted autonomy by State legislatures to the extent that they are largely financially independent. Some of these are funded from earmarked tax revenues and are vested with independent borrowing powers. A considerable number of others belong to the category of public enterprises, since they are able to charge for their services so as to cover their costs of operation. These bodies have usually been created to control a specific activity or provide a specific service within a State. It is often the case that in other States similar activities are carried out, or services are provided, by central government or local authorities. Details of the activities of autonomous or semi-autonomous State authorities engaged in such fields as construction and maintenance of roads and bridges, provision of water supply and sewerage services, harbour facilities, transport, electricity and gas, housing and banking may be found in chapters relevant to those subjects and in State Year Books.

Details of the transactions of State authorities are given in the tables which follow. Reference should be made to the introduction of *State and Local Government Finance, Australia* (5504.0) for definitions and descriptions of items appearing in these tables, and also for further details of the organisations covered by the figures. Additional information relating to the activities of the State authorities may also be found in the Year Books of the individual States.

Coverage—Northern Territory government authorities

On 1 July 1978 the Nothern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In the period up to and including 1977-78 receipts and outlays relating to the Nothern Territory are included with Commonwealth receipts and outlays but from 1978–79 onwards they have been grouped with the receipts and outlays of State authorities.

Outlay and receipts

The outlay and receipts of State authorities for the six year period ended 1981-82 are given in the following table.

STATE AUTHORITIES(*a*): OUTLAY AND RECEIPTS

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
OUTLAY						
Final consumption expenditure	8,145.1	9,250.2	10,232.0	11,629.4	13,552.3	15,435.1
Gross capital formation—						
Increase in stocks	25.5	62.7	36.5	64.3	110.0	131.4
Expenditure on new fixed assets	4,172.0	4,753.5	5,184.1	5,580.2	6,403.5	7,761.3
Expenditure on existing assets (net)	148.2	100.3	79.2	14.5	7.2	–968.6
Total gross capital formation	*4,345.8*	*4,916.6*	*5,299.8*	*5,659.0*	*6,520.7*	*6,924.2*
Transfer payments—						
Interest	1,476.6	1,714.3	1,966.4	2,221.4	2,663.9	3,191.9
Personal benefit payments	247.3	280.3	283.5	308.1	296.3	322.8
Subsidies	61.9	92.7	106.3	124.3	137.7	147.6
Transfers overseas	0.1	0.1	0.1	0.1	0.2	0.1
Grants for private capital purposes	49.8	64.3	73.1	65.1	67.6	91.0
Grants to local authorities	414.1	479.0	512.9	588.0	684.1	747.6
Total transfer payments	*2,249.9*	*2,630.8*	*2,942.3*	*3,307.1*	*3,849.6*	*4,500.9*
Net advances—						
To the private sector	189.4	214.0	114.9	97.2	91.0	74.7
To public financial enterprises	83.4	109.0	91.0	53.3	98.5	59.8
To local authorities	18.0	11.5	15.0	12.7	16.6	21.1
Total net advances	*290.8*	*334.5*	*220.9*	*163.2*	*206.1*	*155.7*
Total outlay	**15,031.6**	**17,132.0**	**18,695.1**	**20,758.8**	**24,128.7**	**27,015.8**
of which—						
current outlay	10,133.2	11,584.3	12,858.1	14,602.5	17,059.4	19,557.7
capital outlay	4,898.3	5,547.7	5,837.0	6,156.2	7,069.4	7,458.1
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.	3,973.5	4,300.8	4,667.3	5,264.4	6,045.1	7,104.2
Income from public enterprises	353.5	380.0	471.6	650.7	704.5	757.9
Property income	621.6	740.9	789.0	975.7	1,173.0	1,328.6
Grants from the Commonwealth Government—						
for current purposes	6,110.2	7,215.3	8,137.9	9,079.6	10,290.4	11,382.0
for capital purposes	1,537.3	1,508.9	1,483.8	1,565.4	1,668.9	1,769.8
Grants from local authorities	32.1	36.0	35.5	44.7	51.8	56.5
Total receipts	*12,628.2*	*14,181.8*	*15,585.0*	*17,580.5*	*19,933.7*	*22,399.0*
Financing items—						
Net borrowing—						
Public trading enterprises	668.6	893.5	1,188.8	1,445.2	1,761.8	2,365.7
General government	124.8	118.0	204.2	274.5	311.2	408.1
Advances from the Commonwealth Government (net)—						
For loan works purposes	744.7	784.8	770.6	704.5	741.7	730.4
Other	533.4	476.3	356.6	191.5	194.8	131.7
Net receipts of private trust funds	213.1	171.3	163.6	164.8	189.8	262.6
Reduction in cash and bank balances	–396.2	–43.7	–246.5	–142.2	–102.1	–474.9
Reduction in security holdings—						
Investment of private trust funds	–39.8	–42.2	–69.2	–82.3	–27.7	–114.9
Investment of governmental trust funds and public corporations	–58.5	–121.7	–54.9	–66.2	59.4	80.2
Other funds available (including errors and omissions)—						
Depreciation allowances	356.2	412.5	467.8	489.7	561.5	631.1
Other	257.1	301.3	329.2	198.9	504.8	196.7
Total financing items	*2,403.4*	*2,950.2*	*3,110.1*	*3,178.3*	*4,195.0*	*4,216.8*
Total funds available	**15,031.6**	**17,132.0**	**18,695.1**	**20,758.8**	**24,128.7**	**27,015.8**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities from 1978 79.

The following table provides details of the outlay and receipts of State authorities in each of the six States and the Northern Territory.

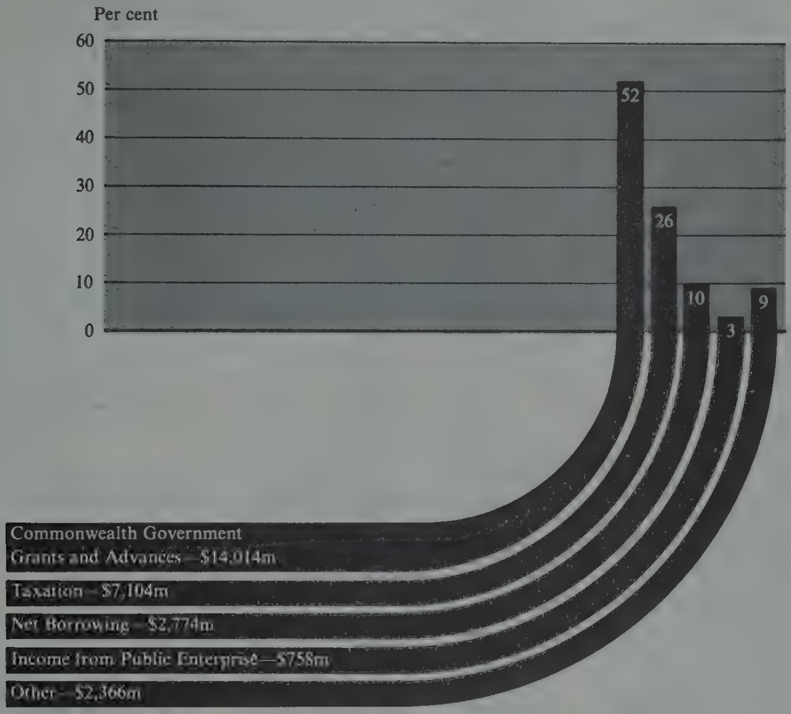
STATE AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY STATE, 1981–82
($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
OUTLAY								
Final consumption expenditure	5,280.3	3,987.3	2,204.2	1,441.8	1,532.1	567.7	421.7	15,435.1
Gross capital formation—								
Increase in stocks	115.8	-12.1	5.2	7.4	11.1	2.2	1.8	131.4
Expenditure on new fixed assets	2,472.7	2,249.7	1,473.6	503.3	656.4	233.5	172.1	7,761.3
Expenditure on existing assets (net)	-896.6	-75.1	-12.7	-11.9	17.7	-0.2	10.1	-968.6
Total gross capital formation	*1,692.0*	*2,162.5*	*1,466.1*	*498.9*	*685.2*	*235.5*	*184.0*	*6,924.2*
Transfer payments—								
Interest	972.9	1,066.6	437.3	295.3	241.3	144.6	33.8	3,191.9
Personal benefit payments	171.1	61.8	38.3	21.2	18.0	11.5	0.8	322.8
Subsidies	40.3	56.1	15.4	13.9	11.5	8.4	2.0	147.6
Transfers overseas	0.1	–	–	–	–	–	–	0.1
Grants for private capital purposes	33.6	15.3	22.6	12.7	5.9	0.2	0.6	91.0
Grants to local authorities	246.6	197.2	148.8	46.9	77.0	24.7	6.5	747.6
Total transfer payments	*1,464.4*	*1,397.0*	*662.5*	*390.1*	*353.8*	*189.5*	*43.7*	*4,500.9*
Net advances—								
To the private sector	-13.1	2.5	50.4	-17.0	-1.2	3.1	50.1	74.7
To public financial enterprises	17.1	3.8	–	32.2	-0.1	6.8	–	59.8
To local authorities	5.8	-0.4	13.8	-0.1	-2.3	3.1	1.3	21.1
Total net advances	*9.8*	*6.0*	*64.1*	*15.1*	-3.6	13.0	51.4	155.7
Total outlay	**8,446.5**	**7,552.7**	**4,396.9**	**2,345.8**	**2,567.5**	**1,005.7**	**700.7**	**27,015.8**
of which—								
current outlay	6,620.5	5,312.5	2,767.7	1,805.5	1,838.3	750.3	462.9	19,557.7
capital outlay	1,826.0	2,240.3	1,629.1	540.4	729.1	255.4	237.7	7,458.1
RECEIPTS AND FINANCING ITEMS								
Receipts—								
Taxes, fees, fines, etc.	2,807.7	2,123.4	921.1	491.0	561.9	161.2	37.8	7,104.2
Income from public enterprises	9.3	366.1	174.5	112.1	62.3	78.5	-44.9	757.9
Property income	322.3	281.3	370.6	113.3	182.9	31.4	26.9	1,328.6
Grants from the Commonwealth Government								
for current purposes	3,503.0	2,664.0	1,916.8	1,159.9	1,239.5	451.7	447.2	11,382.0
for capital purposes	525.0	416.5	286.9	169.8	183.7	97.6	90.3	1,769.8
Grants from local authorities	19.5	13.8	10.1	3.9	2.9	6.4	–	56.5
Total receipts	*7,186.6*	*5,865.0*	*3,679.9*	*2,050.2*	*2,233.3*	*826.8*	*557.3*	*22,399.0*
Financing items								
Net borrowing								
Public trading enterprises	673.2	1,049.8	222.8	113.7	218.9	87.8	-0.5	2,365.7
General government	94.9	13.5	228.5	6.9	28.3	1.8	34.0	408.1
Advances from the Commonwealth Government (net)—								
For loan works purposes	209.8	166.1	87.2	86.8	59.9	48.2	72.5	730.4
Other	72.2	31.5	15.2	-10.4	11.5	4.0	7.7	131.7
Net receipts of private trust funds	54.8	-35.4	161.3	15.7	47.2	19.2	-0.2	262.6
Reduction in cash and bank balances	24.3	20.2	-343.0	30.8	-140.8	-14.0	-3.8	-474.9
Reduction in security holdings								
Investments of private trust funds	49.4	-3.4	–	-17.2	-32.0	-12.9	–	-114.9
Investments of governmental trust funds and public corporations	51.9	58.2	-15.5	-12.7	0.1	-1.9	–	80.2
Other funds available (including errors and omissions)								
Depreciation allowances	195.3	198.7	92.3	48.3	72.8	15.9	7.7	631.1
Other	18.5	188.5	268.2	33.8	68.2	30.7	26.0	596.7
Total financing items	*1,259.9*	*1,687.7*	*717.0*	*295.7*	*334.2*	*178.9*	*143.4*	*4,616.8*
Total funds available	**8,446.5**	**7,552.7**	**4,396.9**	**2,345.8**	**2,567.5**	**1,005.7**	**700.7**	**27,015.8**

(*a*) Excludes financial enterprises.

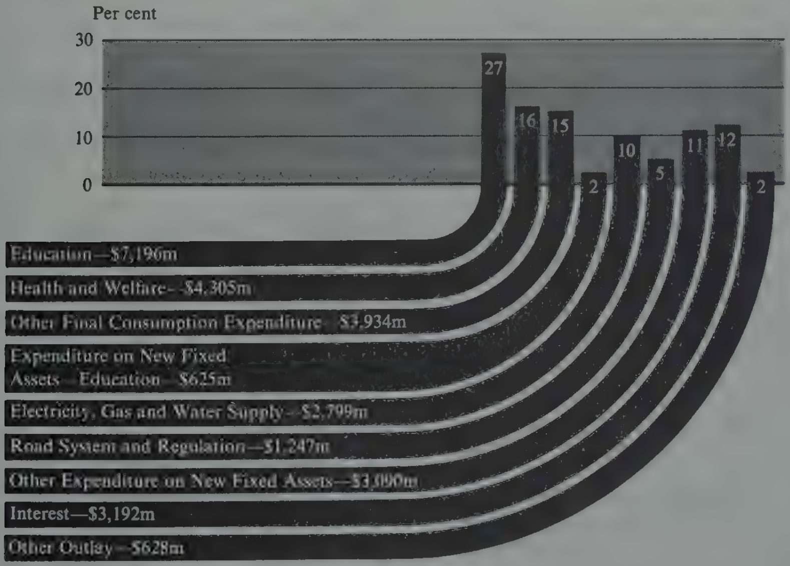
STATE AUTHORITIES, 1981-82

RECEIPTS AND FINANCING ITEMS



TOTAL $27,016 million

OUTLAY



TOTAL $27,016 million

PLATE 44

Main components of outlay

The main component of the outlay of State authorities is expenditure on goods and services. As in the case of authorities of the Commonwealth Government, this expenditure consists mainly of final consumption expenditure and expenditure on new fixed assets. The following tables show final consumption expenditure and expenditure on new fixed assets classified by purpose for State authorities.

STATE AUTHORITIES(*a*): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE

($ million)

Purpose	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
Law, order and public safety	770.1	881.0	992.6	1,171.6	1,374.0	1,588.9
General administration, n.e.c.	506.5	587.5	662.4	778.8	913.6	1,037.9
Education	3,872.0	4,387.8	4,765.6	5,411.9	6,258.4	7,196.3
Health	2,209.5	2,485.4	2,759.9	3,074.2	3,590.5	4,004.9
Social security and welfare	124.1	147.1	181.2	214.0	282.1	300.2
Housing and community amenities—						
Housing	5.4	3.9	4.4	4.0	1.2	3.4
Community and regional development	24.1	26.3	35.6	35.6	37.8	40.0
Protection of the environment, and community amenities	22.0	24.8	27.6	31.7	38.3	39.6
Recreation and culture	97.6	120.5	146.8	167.3	192.8	227.5
Economic services—						
Agriculture, forestry, fishing	302.8	348.3	383.5	439.7	474.4	538.1
Mining, manufacturing and construction	48.3	54.0	61.3	69.9	81.8	81.5
Electricity, gas and water supply	6.1	8.1	9.7	9.8	14.1	14.9
Rail transport (*b*)	1.0	1.2	0.7	1.0	0.8	-1.0
Sea transport	4.6	5.3	2.5	1.9	2.4	2.0
Road systems and regulation	13.8	13.7	17.2	18.8	23.5	45.4
Other transport services, n.e.c.	4.2	4.0	7.6	9.6	15.3	26.8
Other economic services(*c*)	131.9	149.3	171.3	187.6	224.2	269.9
Other purposes	1.3	2.0	1.9	2.2	26.9	18.7
Total	**8,145.1**	**9,250.2**	**10,232.0**	**11,629.4**	**13,552.3**	**15,435.1**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities from 1978-79. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

STATE AUTHORITIES(*a*): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE 1981–82

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
General public services								
Law, order and public safety	566.4	356.5	248.2	150.3	161.9	58.1	47.4	1,588.9
General administration, n.e.c.	387.7	235.5	155.3	54.7	93.4	49.2	62.0	1,037.9
Education	2,487.8	2,042.3	968.7	698.7	655.8	242.3	100.7	7,196.3
Health	1,427.2	999.1	565.3	373.0	432.6	131.6	76.2	4,004.9
Social security and welfare	69.9	72.0	58.4	28.2	34.2	9.5	28.0	300.2
Housing and community amenities								
Housing	0.4	2.0	-4.0	0.5	0.6	1.0	2.9	3.4
Community and regional development	10.0	22.7	0.3	3.0	-3.9	0.7	7.2	40.0
Protection of the environment, and community amenities	8.6	14.4	2.7	7.2	3.2	0.8	2.8	39.6
Recreation and culture	57.6	49.9	29.3	31.1	22.6	15.7	21.4	227.5
Economic services								
Agriculture, forestry, fishing	137.8	105.8	138.3	41.2	64.1	37.0	13.9	538.1
Mining, manufacturing and construction	16.4	10.1	11.9	10.5	17.9	5.5	9.2	81.5
Electricity, gas and water supply	5.2	-3.4	6.6	-0.2	5.5	1.1	..	14.9
Rail transport(*b*)	..	0.5	-2.2	—	0.7	..	..	-1.0
Sea transport	2.9	-0.1	-3.0	2.1	..	0.1	..	2.0
Road systems and regulation	5.1	18.3	3.7	3.4	0.6	1.4	12.8	45.4
Other transport services, n.e.c.	5.0	0.5	—	0.3	0.9	0.4	19.7	26.8
Other economic services(*c*)	77.5	58.6	24.7	37.8	40.4	13.7	17.2	269.9
Other purposes	14.8	2.3	—	..	1.6	-0.4	0.3	18.7
Total	**5,280.3**	**3,987.3**	**2,204.2**	**1,441.8**	**1,532.1**	**567.7**	**421.7**	**15,435.1**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

STATE AUTHORITIES(*a*): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
Law, order and public safety	73.3	91.7	100.3	114.0	132.7	130.7
General administration, n.e.c.	87.6	112.1	116.1	108.2	107.4	108.1
Education	574.2	659.9	677.8	623.8	615.5	624.9
Health	334.0	322.8	332.2	285.9	258.3	234.5
Social security and welfare	12.1	10.7	13.4	13.6	12.6	15.0
Housing and community amenities—						
Housing	248.0	307.1	271.7	273.9	347.4	336.1
Community and regional development	42.5	38.2	33.9	47.1	67.3	97.3
Protection of the environment, and community amenities	343.8	352.5	344.6	351.2	358.1	401.9
Recreation and culture	33.5	51.9	70.5	76.9	96.9	102.5
Economic services—						
Agriculture, forestry, fishing	195.2	206.8	202.2	207.5	240.6	257.8
Mining, manufacturing and construction	61.8	68.0	55.9	96.1	134.3	161.1
Electricity and gas	650.1	834.5	1,092.6	1,336.9	1,708.4	2,450.1
Water supply	260.2	278.3	274.8	265.8	281.7	348.8
Rail transport(*b*)	312.4	386.0	439.8	456.0	509.5	687.8
Sea transport	94.8	116.6	147.4	160.5	257.2	356.4
Road systems and regulation	772.1	830.1	912.8	1,028.0	1,138.0	1,247.1
Other transport services, n.e.c.	30.2	39.3	42.9	56.1	59.2	93.2
Other economic services(*c*)	45.7	46.1	54.3	79.0	78.0	106.6
Other purposes	0.5	0.8	1.3	-0.1	0.5	1.4
Total	**4,172.0**	**4,753.5**	**5,184.1**	**5,580.2**	**6,403.5**	**7,761.3**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities from 1978–79. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

STATE AUTHORITIES(*a*): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE 1981–82

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
General public services—								
Law, order and public safety	43.3	22.9	26.4	13.1	19.9	2.4	2.7	130.7
General administration, n.e.c.	25.7	15.1	32.5	2.4	8.5	13.4	10.5	108.1
Education	224.2	164.0	96.3	53.6	53.7	15.0	17.8	624.9
Health	49.4	56.1	49.2	25.9	41.4	9.4	3.0	234.5
Social security and welfare	5.7	2.1	3.2	2.7	1.0	0.1	0.1	15.0
Housing and community amenities —								
Housing	108.6	73.0	26.5	85.3	30.9	27.0	21.3	336.1
Community and regional development	58.5	10.9	..		3.4		24.1	97.3
Protection of the environment, and community amenities	192.4	132.6	0.8		50.5		3.5	401.9
Recreation and culture	19.8	43.8	17.3		5.0		2.3	102.5
Economic services—								
Agriculture, forestry, fishing	85.1	65.0	60.5	20.1	14.3	10.3	2.5	257.8
Mining, manufacturing and construction	40.8	91.8	16.3	175.1	5.3	95.4	2.2	161.1
Electricity and gas	674.5	922.0	436.0		167.6		13.1	2,450.1
Water supply	93.3	158.0	33.0		25.0		10.5	348.8
Rail transport(*b*)	287.4	150.9	211.2	..	38.3	..	..	687.8
Sea transport	106.3	25.3	199.9	8.0	11.4	1.2	4.4	356.4
Road systems and regulation	419.5	240.2	257.5	112.7	126.6	57.8	48.5	1,247.1
Other transport services, n.e.c.	10.3	19.7	..		43.8		3.6	93.2
Other economic services(*c*)	27.8	56.0	6.8	4.2	8.6	1.3	1.9	106.6
Other purposes	..	0.2	..	..	1.2	..	..	1.4
Total	**2,472.7**	**2,249.7**	**1,473.6**	**503.3**	**656.4**	**233.5**	**172.1**	**7,761.3**

(*a*) Excludes financial enterprises. Includes Northern Territory authorities. (*b*) Includes suburban rail transport systems. (*c*) Includes general administration, regulation and research.

Main components of receipts

The major source of funds available to State authorities is in the form of financial assistance by way of grants and advances from the Commonwealth Government. Taxation is also an important source of revenue, and central government borrowing by way of Commonwealth Government securities issued on behalf of the States, as well as borrowing by statutory bodies, accounted for a significant proportion of the total funds available.

Details of Commonwealth Government financial assistance to the States and the Northern Territory have already been given in the section dealing with Commonwealth Government authorities, and government borrowing activities are dealt with later in this chapter.

The following tables provide details of the taxes collected by State authorities classified by type of tax. Further information relating to State taxes may be found in *Taxation Revenue, Australia* (5506.0).

STATE AUTHORITIES(*a*): TAXATION BY TYPE OF TAX

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Estate, gift, probate and succession duties	251.5	241.1	205.4	171.4	157.9	134.2
Property taxes—						
Land tax	218.1	236.7	258.0	290.8	324.3	340.0
Metropolitan improvement rates	15.8	16.2	18.1	19.2	19.7	28.4
Other	1.6	1.4	1.1	0.9	1.0	1.4
Total property	*235.5*	*254.3*	*277.2*	*310.9*	*345.0*	*369.8*
Liquor taxes	120.9	140.6	155.2	174.7	202.5	231.3
Taxes on gambling—						
Lotteries	109.6	129.2	149.0	195.8	229.4	291.1
Poker machines	92.0	98.2	108.0	120.7	139.0	153.1
Racing	180.5	194.1	205.4	227.4	245.5	267.5
Other	12.0	12.5	17.3	21.8	18.6	15.2
Total gambling	*394.1*	*434.0*	*479.7*	*565.7*	*632.4*	*726.9*
Taxes on ownership and operation of motor vehicles—						
Vehicle registration fees and taxes	397.0	461.3	499.5	497.8	544.5	685.5
Drivers', etc., licences and fees	59.9	60.4	74.4	75.3	82.7	97.7
Stamp duty on vehicle registration	116.5	126.0	141.0	151.1	173.9	205.4
Road transport taxes	15.9	14.5	13.8	14.7	16.5	6.3
Road maintenance contributions	44.7	44.5	45.3	6.4	0.6	0.5
Motor car third party insurance surcharge and duties	12.9	13.4	13.7	18.7	23.1	24.4
Total motor vehicles	*646.8*	*720.1*	*787.7*	*764.0*	*841.3*	*1,019.8*
Pay-roll tax	1,305.9	1,418.5	1,525.9	1,694.4	1,922.4	2,394.8
Fire brigades contributions from insurance companies, etc.	99.0	113.0	120.8	137.9	157.0	185.4
Stamp duties, n.e.i.	666.7	702.6	800.2	993.4	1,241.4	1,344.6
Fees from regulatory services, n.e.i.	44.9	49.0	55.4	61.8	71.6	89.3
Other taxes, fees, fines, etc.	208.6	227.6	259.8	390.3	473.6	608.1
Total taxation	**3,973.9**	**4,300.7**	**4,667.3**	**5,264.4**	**6,045.1**	**7,104.2**

(*a*) Includes Northern Territory authorities from 1978-79.

STATE AUTHORITIES: TAXATION BY TYPE OF TAX, 1981–82

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
Estate, gift, probate and succession duties	72.7	56.2	0.5	0.2	1.3	3.3	–	134.2
Property taxes—								
Land tax	143.8	115.9	25.3	19.3	29.4	6.4	–	340.0
Metropolitan improvement rates	–	23.2	–	–	5.2	–	–	28.4
Other	0.5	–	–	0.7	0.2	–	–	1.4
Total property	*144.3*	*139.1*	*25.3*	*20.0*	*34.8*	*6.4*	–	*369.8*
Liquor taxes	98.4	52.2	37.4	15.9	19.4	5.8	2.3	231.3
Taxes on gambling—								
Lotteries	93.8	128.4	27.9	19.5	11.9	8.7	0.9	291.1
Poker machines	153.1	–	–	–	–	–	–	153.1
Racing	116.9	84.9	30.6	11.1	19.3	4.2	0.4	267.5
Other	3.3	2.9	3.0	1.0	–	3.4	1.6	15.2
Total gambling	*367.1*	*216.2*	*61.5*	*31.6*	*31.2*	*16.3*	*2.9*	*726.9*
Taxes on ownership and operation of motor vehicles—								
Vehicle registration fees and taxes	274.8	152.3	131.8	44.4	56.1	22.3	3.8	685.5
Drivers', etc., licences and fees	36.8	28.0	15.3	5.3	9.5	2.8	–	97.7
Stamp duty on vehicle registration	69.9	74.9	19.1	21.8	11.9	7.8	–	205.4
Road transport taxes	2.0	–2.7	3.0	0.1	3.7	0.3	–	6.3
Road maintenance contributions	–	–	0.1	–	–	0.4	–	0.5
Motor car third party insurance surcharge and duties	–	18.0	–	2.0	3.8	0.6	–	24.4
Total motor vehicles	*383.5*	*270.5*	*169.3*	*73.6*	*85.0*	*34.2*	*3.8*	*1,019.8*
Pay-roll tax	1,009.9	665.5	289.4	167.7	191.0	53.0	18.3	2,394.8
Fire brigades contributions from insurance companies, etc.	62.4	56.8	34.4	14.4	16.9	0.6	–	185.4
Stamp duties, n.e.i.	512.5	364.8	247.5	85.0	104.5	24.1	6.2	1,344.6
Fees from regulatory services, n.e.i.	34.0	20.9	17.8	6.7	7.2	1.2	1.5	89.3
Other taxes, fees, fines, etc.	122.9	281.2	38.0	75.9	70.6	16.3	2.8	608.1
Total taxation	**2,807.7**	**2,123.4**	**921.1**	**491.0**	**561.9**	**161.2**	**37.8**	**7,104.2**

LOCAL AUTHORITIES

In each State of Australia and in the Northern Territory there exists a system of local government whose powers and responsibilities are generally similar and cover such matters as the construction and maintenance of roads, streets and bridges; water, sewerage and drainage systems; health and sanitary services; the supervision of building; and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, swimming pools, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. vary considerably from State to State, and even within States.

The areas over which local government bodies, numbering almost 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania and the Northern Territory as cities and municipalities. In New South Wales some local authorities in an area have combined to form County Councils which provide services such as electricity and water supply. Within shires there are also some municipal units known as urban areas. Apart from the Australian Capital Territory and the more sparsely populated parts of New South Wales, South Australia and the Northern Territory, practically the whole of Australia comes within local government jurisdiction. For further details *see* State Year Books.

Coverage—Northern Territory local authorities

On 1 July 1978, the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In the period up to and including

1977–78 receipts and outlays relating to the Northern Territory are included with Commonwealth Government receipts and outlays but from 1978–79 onwards they have been grouped with the receipts and outlays of State and local authorities.

Area, population, dwellings, and rates and penalties for ordinary services

The area, population, dwellings, and the amount of rates and penalties collected for ordinary services in the incorporated areas of each State are shown in the following table. Particulars of dwellings are in accordance with the definition used in the Census, and are compiled from information collected on the Census Schedules. In the table, where the boundary of a capital city statistical division cuts across a local government area, the area of that capital city statistical division has been estimated. Particulars of population for capital city statistical divisions take account of those local government areas which overlap with capital city statistical division boundaries.

The item 'Rates and Penalties for Ordinary Services' relates to general and other special or local rates (excluding water and sewerage rates) levied or declared or, where the cash accounting system operates, the rates collected.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND RATES AND PENALTIES FOR ORDINARY SERVICES—30 JUNE 1980

Location (a)	*No. of local authorities*	*Area*	*Population*	*Dwellings (b)*	*Rates and penalties—ordinary services*
		square kilometres	'000	'000	$'000
New South Wales—					
Sydney Statistical Division	45	12,407	3,232	1,116	312,697
Other	157	693,253	1,907	634	187,732
Total New South Wales	*202*	*705,660*	*5,139*	*1,750*	*500,429*
Victoria—					
Melbourne Statistical Division	56	6,110	2,760	na	279,872
Other	155	221,017	1,127	na	108,868
Total Victoria	*211*	*227,127*	*3,887*	*na*	*388,740*
Queensland—					
Brisbane Statistical Division	10	3,080	1,029	na	82,948
Other	124	1,723,920	1,219	na	108,113
Total Queensland	*134*	*1,727,000*	*2,248*	*na*	*191,061*
South Australia—					
Adelaide Statistical Division	33	1,842	934	338	85,519
Other	95	151,834	351	130	19,372
Total South Australia	*128*	*153,676*	*1,285*	*468*	*104,891*
Western Australia—					
Perth Statistical Division	26	5,363	902	316	68,210
Other	112	2,522,676	363	121	31,864
Total Western Australia	*138*	*2,528,039*	*1,265*	*437*	*100,074*
Tasmania—					
Hobart Statistical Division	7	940	169	59	15,486
Other	42	67,391	254	90	21,833
Total Tasmania	*49*	*68,331*	*423*	*149*	*37,319*

(*a*) Unincorporated areas are excluded in all States. (*b*) Dwelling figures are intercensal estimates of stocks of dwellings. (*c*) Based on year ended 31 December 1978. (*d*) Based on year ended 30 September 1979.

Outlay and receipts

The following tables show details of the outlay and receipts of all local authorities for the years 1976–77 to 1981–82, and of local authorities in each of the six States and the Northern Territory in 1980–81. Figures shown for 1981–82 are based on limited data and may be subject to significant revision as more complete accounting information is collected.

LOCAL AUTHORITIES(*a*): OUTLAY AND RECEIPTS

($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
OUTLAY						
Final consumption expenditure—						
General public services	228.4	269.6	302.5	336.5	381.5	442.4
Education	8.5	8.5	9.5	10.6	12.4	14.3
Health	41.6	45.5	52.8	50.7	59.6	68.4
Social security and welfare	17.8	26.4	34.4	37.7	53.0	62.4
Housing and community amenities—						
Community and regional development	13.5	12.6	16.4	25.0	33.0	40.2
Protection of the environment	65.1	70.5	82.5	111.2	127.7	143.3
Other	10.6	12.9	15.3	25.5	30.2	35.9
Recreation and culture	167.4	192.0	215.6	231.8	273.6	326.0
Economic services	63.2	75.4	87.7	95.2	107.1	114.5
Other purposes	4.4	10.7	11.5	14.5	4.8	7.0
Total	*620.2*	*724.3*	*828.1*	*938.8*	*1,083.0*	*1,254.5*
Gross capital formation						
Expenditure on new fixed assets—						
General public services	102.7	131.2	155.7	158.4	170.1	188.8
Education	4.2	2.8	2.8	2.4	2.0	1.7
Health	2.4	1.8	3.0	3.2	3.4	4.0
Social security and welfare	6.5	7.9	10.7	12.7	13.5	15.1
Housing and community amenities—						
Community and regional development	4.4	9.4	11.8	4.1	6.4	7.6
Protection of the environment	126.7	135.0	134.4	160.1	175.5	201.8
Other	9.1	10.4	7.9	15.9	26.6	31.3
Recreation and culture	75.5	90.4	114.9	136.6	161.8	161.5
Economic services—						
Mining, manufacturing and construction	8.6	9.1	9.6	5.5	6.4	2.6
Electricity and gas	131.4	121.7	122.0	145.1	155.4	203.1
Water supply	60.9	75.3	85.0	94.9	116.6	134.9
Road systems and regulation	607.0	650.7	708.3	733.0	820.8	877.7
Other transport services, n.e.c.	6.4	6.3	2.8	5.5	6.6	6.8
Other economic services(*b*)	6.5	7.1	7.9	18.2	22.1	30.4
Other purposes	2.3	7.9	2.7	24.2	28.1	34.0
Total	*1,154.5*	*1,267.0*	*1,379.5*	*1,519.5*	*1,715.2*	*1,901.4*
Expenditure on existing assets and stocks (net)	23.5	27.9	2.0	1.3	-22.0	16.0
Interest paid	215.4	252.9	289.7	325.4	369.3	435.2
Grants to State authorities	32.1	36.0	35.5	44.7	51.8	56.5
Net advances to the private sector	6.1	4.5	12.8	7.5	2.3	3.7
Total outlay	**2,051.7**	**2,312.7**	**2,547.6**	**2,837.2**	**3,199.5**	**3,667.2**
of which						
current outlay	857.8	1,001.5	1,144.1	1,295.2	1,492.4	1,733.5
capital outlay	1,193.9	1,311.2	1,403.5	1,542.0	1,707.1	1,933.7
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.—						
Rates on land	1,033.7	1,120.9	1,214.8	1,339.0	1,518.3	1,732.6
Licences, etc.	38.7	43.3	49.0	60.9	77.1	88.4
Total	*1,072.4*	*1,164.2*	*1,263.8*	*1,399.9*	*1,595.4*	*1,821.0*
Income from public enterprises	181.6	188.9	186.0	195.4	208.0	243.5
Property income	55.9	82.2	93.8	102.7	135.0	194.2
Grants from State and Commonwealth authorities	427.6	493.1	530.3	605.3	707.4	776.7
Total receipts	*1,737.3*	*1,928.4*	*2,074.1*	*2,303.4*	*2,645.8*	*3,035.4*
Financing items—						
Net borrowing	332.0	309.4	333.3	361.0	312.0	290.2
Advances from State and Commonwealth authorities	18.0	11.5	15.0	12.7	16.6	21.1
Net receipts of private trust funds	3.3	3.3	1.7	11.7	-28.7	-19.4
Reduction in cash and bank balances	148.8	-48.5	7.6	11.9	-16.4	-70.3
Reduction in security holdings—						
Investments of governmental funds and trading enterprises	-12.6	-69.4	-57.9	-59.7	-12.8	-1.1
Other funds available (including errors and omissions)—						
Depreciation allowances	52.8	58.5	73.3	74.7	85.6	102.4
Other	69.5	119.5	100.6	121.6	197.4	308.9
Total financing items	*314.3*	*384.3*	*473.5*	*533.9*	*553.7*	*631.8*
Total funds available	**2,051.7**	**2,312.7**	**2,547.6**	**2,837.2**	**3,199.5**	**3,667.2**

(*a*) Includes Northern Territory authorities from 1978-79. (*b*) Includes general administration, regulation and research.

LOCAL AUTHORITIES: OUTLAY AND RECEIPTS, 1981–82

($ million)

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Total*
OUTLAY								
Final consumption expenditure—								
General public services	166.4	138.2	59.6	31.0	30.1	13.9	3.3	442.4
Education	0.9	13.1	0.1	–	0.1	–	–	14.3
Health	23.1	26.0	10.0	3.0	5.2	1.0	–	68.4
Social security and welfare	11.0	45.3	1.3	1.8	2.5	0.4	0.1	62.4
Housing and community amenities—								
Community and regional development	20.0	6.7	6.3	3.7	3.1	0.4	–	40.2
Protection of the environment	58.2	45.0	12.0	16.7	7.3	3.8	0.3	143.3
Other	22.5	3.4	5.3	1.7	2.9	–	0.4	35.9
Recreation and culture	110.2	105.7	36.9	25.2	36.2	7.6	4.3	326.0
Economic services	22.2	62.9	15.5	9.4	5.6	–2.0	1.1	114.5
Other purposes	0.1	–0.1	–1.0	4.0	2.8	1.3	–	7.0
Total	*434.8*	*445.9*	*146.0*	*96.3*	*95.7*	*26.5*	*9.4*	*1,254.5*
Gross capital formation—								
Expenditure on new fixed assets—								
General public services	73.3	92.9	7.3	7.7	5.1	1.6	0.8	188.8
Education	0.3	1.4	–	–	–	–	–	1.7
Health	1.9	0.7	0.1	0.5	0.8	–	–	4.0
Social security and welfare	7.4	3.6	0.9	2.0	1.1	0.1	–	15.1
Housing and community amenities —								
Community and regional development	2.7	–	3.6	0.4	0.9	–	–	7.6
Protection of the environment	80.4	12.8	85.8	8.3	5.6	8.8	–	201.8
Other	19.4	3.6	4.0	0.7	2.8	0.8	–	31.3
Recreation and culture	53.5	29.7	40.3	10.6	22.1	3.5	1.8	161.5
Economic services —								
Mining, manufacturing and construction	0.7	1.9	–	–	–	–	–	2.6
Electricity and gas	196.2	5.8	0.2	0.4	0.5	–	–	203.1
Water supply	68.3	–	63.1	–	–	3.6	–	134.9
Road systems and regulation	351.6	144.2	187.1	61.1	97.4	29.8	6.6	877.7
Other transport services, n.e.c.	1.0	1.7	2.8	0.6	0.6	–	–	6.8
Other economic services(*a*)	13.1	9.2	2.8	1.5	3.1	0.2	0.6	30.4
Other purposes	–	–	18.6	9.5	3.0	2.5	0.6	34.0
Total	*869.8*	*307.5*	*416.6*	*103.0*	*143.1*	*51.1*	*10.4*	*1,901.4*
Expenditure on existing assets and stocks (net)	*14.9*	*12.2*	*–1.9*	*3.6*	*–12.8*	–	–	*16.0*
Interest paid	*181.8*	*72.0*	*124.5*	*17.3*	*22.4*	*16.1*	*1.1*	*435.2*
Grants to State authorities	*19.5*	*13.8*	*10.1*	*3.9*	*2.9*	*6.4*	–	*56.5*
Net advances to the private sector	*4.4*	*–0.4*	–	–	–	*–0.3*	–	*3.7*
Total outlay	**1,525.1**	**851.0**	**695.3**	**224.2**	**251.2**	**99.8**	**20.8**	**3,667.2**
of which—								
current outlay	563.4	441.4	239.1	97.5	104.3	46.5	10.1	1,502.1
capital outlay	720.9	360.7	282.1	94.1	118.0	47.0	7.1	1,630.0
RECEIPTS AND FINANCING ITEMS								
Receipts								
Taxes, fees, fines, etc.								
Rates on land	638.2	511.0	262.5	132.9	133.5	46.5	7.9	1,732.6
Licences, etc.	28.0	26.8	20.7	6.6	4.0	2.2	0.2	88.4
Total	*666.2*	*537.8*	*283.2*	*139.5*	*137.5*	*48.7*	*8.1*	*1,821.0*
Income from public enterprises	117.3	35.9	74.5	0.4	–	15.4	–	243.5
Property income	94.7	32.6	32.0	10.3	16.9	6.4	1.2	194.2
Grants from State and Commonwealth authorities	255.3	205.2	153.1	48.2	79.7	26.7	8.5	776.7
Total receipts	*1,133.4*	*811.6*	*542.8*	*198.4*	*234.1*	*97.2*	*17.7*	*3,035.4*
Financing items								
Net borrowing	89.0	46.0	118.6	11.1	18.7	5.2	1.6	290.2
Advances from State and Commonwealth authorities	5.8	–0.4	13.8	–0.1	–2.3	3.1	1.3	21.1
Net receipts of private trust funds	–19.4	–	–	–	–	–	–	–19.4
Reduction in cash and bank balances	57.4	–4.4	–0.1	11.1	–13.6	–5.8	–	–70.3
Reduction in security holdings								
Investments of governmental funds and trading enterprises	14.6	–20.0	–	–	–	4.4	–	–1.1
Other funds available (including errors and omissions)								
Depreciation allowances	101.9	–	–	0.4	–	–	–	102.4
Other	257.1	18.2	20.2	3.3	14.3	–4.3	0.2	308.9
Total financing items	*391.6*	*39.3*	*152.5*	*25.7*	*17.0*	*2.5*	*3.1*	*631.8*
Total funds available	**1,525.1**	**851.0**	**695.3**	**224.2**	**251.2**	**99.8**	**20.8**	**3,667.2**

(*a*) Includes general administration, regulation and research.

ALL PUBLIC AUTHORITIES

In the following tables the transactions of the Commonwealth Government, State and local authorities have been brought together and consolidated to provide details of the outlay and receipts of the public authority sector as a whole.

Summary of outlay and receipts

The outlay and receipts of all public authorities for the years 1976–77 to 1981–82 are set out in the following table.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS

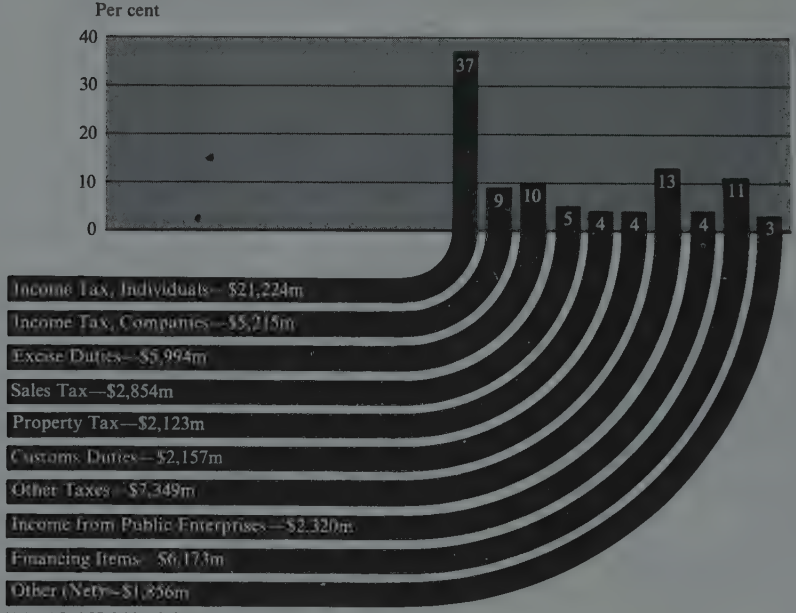
($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
OUTLAY						
Final consumption expenditure	13,502.1	15,213.7	16,716.8	18,885.8	22,060.0	25,398.9
Gross capital formation—						
Increase in stocks	–23.0	–47.5	–162.1	8.0	203.3	316.5
Expenditure on new fixed assets	6,993.2	7,792.0	8,076.0	8,705.9	10,083.5	11,821.0
Expenditure on existing assets (net)	174.0	103.9	–18.8	–22.6	–452.3	–1,237.3
Total gross capital formation	*7,144.2*	*7,848.4*	*7,895.0*	*8,691.2*	*9,834.5*	*10,900.2*
Transfer payments—						
Interest	2,096.0	2,515.3	3,045.5	3,527.3	4,209.8	5,020.3
Transfers to persons	7,760.0	8,704.4	9,555.6	10,393.3	11,738.2	13,666.1
Subsidies	314.0	516.4	632.0	815.3	997.1	1,095.5
Transfers overseas	388.0	417.3	474.9	520.0	574.8	668.3
Grants for private capital purposes	160.0	194.5	204.9	231.9	205.2	319.4
Total transfer payments	*10,718.0*	*12,348.1*	*13,913.0*	*15,487.9*	*17,725.0*	*20,769.5*
Net advances						
To the private sector	255.3	281.6	138.0	93.3	130.8	160.9
To public financial enterprises	90.8	98.5	80.8	–7.9	84.3	44.9
To overseas	42.7	0.3	18.4	79.1	54.0	–8.9
Total net advances	*388.8*	*380.4*	*237.2*	*164.5*	*269.1*	*196.9*
Total outlay	**31,753.1**	**35,790.5**	**38,761.8**	**43,229.4**	**49,888.3**	**57,265.4**
of which—						
current outlay	24,063.2	27,367.2	30,424.8	34,141.6	39,579.8	45,848.8
capital outlay	7,689.9	8,423.3	8,327.1	9,087.9	10,308.6	11,416.6
RECEIPTS AND FINANCING ITEMS						
Receipts—						
Taxes, fees, fines, etc.	24,811.1	26,958.9	29,397.4	34,212.5	40,354.9	46,915.8
Income from public enterprises	1,192.1	1,388.1	1,668.0	1,838.6	1,904.2	2,320.3
Interest, etc., received	826.9	1,014.3	1,061.1	1,310.4	1,591.3	1,855.9
Total receipts	*26,830.1*	*29,361.3*	*32,126.5*	*37,361.5*	*43,850.4*	*51,092.0*
Financing items—						
Net borrowing—						
Treasury notes	363.2	193.5	1,546.8	705.3	1,312.2	–347.4
Commonwealth Government securities	2,097.5	2,979.2	2,469.6	893.4	–187.4	693.2
Local authority and public corporation securities	1,445.4	1,534.4	1,715.3	2,248.3	2,364.1	3,142.4
Other general Government securities	126.4	118.0	204.2	274.5	311.2	408.1
Total net borrowing	*4,032.4*	*4,825.0*	*5,935.9*	*4,121.4*	*3,800.1*	*3,896.3*
Funds provided for, or received from I.M.F.	—	—	27.9	60.6	–106.7	0.3
Net receipts of private trust funds	308.3	326.6	326.4	357.1	462.0	628.8
Reduction in cash and bank balances	–854.2	121.6	–718.5	394.5	–452.1	–628.6
Reduction in security holdings	33.2	–464.9	–526.3	–798.6	210.4	78.2
Other funds available (including errors and omissions)—						
Depreciation allowances	851.5	965.0	1,091.5	1,160.7	1,341.1	1,487.5
Other	552.0	656.0	498.5	572.4	783.3	710.6
Total financing items	*4,923.1*	*6,429.3*	*6,635.3*	*5,868.0*	*6,037.9*	*6,173.4*
Total funds available	**31,753.1**	**35,790.5**	**38,761.8**	**43,229.4**	**49,888.3**	**57,265.4**

(*a*) Excludes financial enterprises.

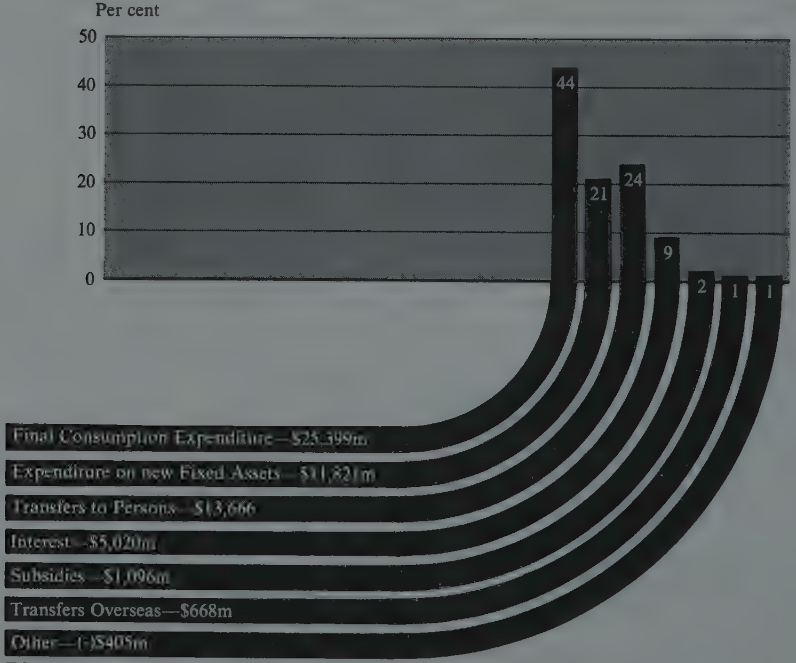
ALL PUBLIC AUTHORITIES, 1981-82

RECEIPTS AND FINANCING ITEMS



TOTAL $57,265 million

OUTLAY



TOTAL $57,265 million

PLATE 45

Main components of outlay

The following tables show final consumption expenditure and expenditure on new fixed assets of all public authorities classified by purpose for the years 1976–77 to 1981–82.

ALL PUBLIC AUTHORITIES(a): FINAL CONSUMPTION EXPENDITURE CLASSIFIED BY PURPOSE
($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
General administration, n.e.c.	1,459.0	1,691.2	1,819.8	2,051.8	2,376.2	2,724.5
External affairs	98.2	110.5	121.6	140.7	163.3	182.1
Law, order and public safety	886.0	1,028.8	1,153.9	1,358.7	1,601.9	1,861.2
General research	152.0	170.1	182.6	209.6	256.7	313.2
Defence	1,998.6	2,184.5	2,401.3	2,786.2	3,290.5	3,832.2
Education	4,115.1	4,652.6	5,062.1	5,672.7	6,550.4	7,536.7
Health	2,717.2	3,034.7	3,317.0	3,663.2	4,270.9	4,804.1
Social security and welfare	353.7	419.3	494.3	568.7	709.5	825.6
Housing and community amenities—						
Housing	6.7	3.6	7.1	13.3	14.0	16.9
Community and regional development	85.8	86.5	93.1	91.5	100.0	109.0
Protection of the environment	90.8	98.2	114.9	150.6	172.9	189.9
Community amenities	10.1	11.7	13.4	18.8	20.9	21.3
Recreation and culture	477.6	535.9	605.3	670.5	785.4	947.7
Economic services—						
Agriculture, forestry, fishing	432.9	487.4	532.3	602.1	658.2	753.1
Mining, manufacturing and construction	78.6	93.4	100.4	118.1	136.9	134.9
Electricity, gas and water supply	6.1	8.4	9.8	10.2	15.0	15.0
Transport and communication	153.1	157.6	180.6	193.3	242.1	330.3
Other economic services(*b*)	374.3	427.1	494.0	549.2	663.4	776.5
Other purposes	6.0	12.7	13.5	16.7	31.7	25.7
Total	**13,502.1**	**15,213.7**	**16,716.8**	**18,885.8**	**22,060.0**	**25,399.9**

(*a*) Excludes financial enterprises. (*b*) Includes general administration, regulation and research.

ALL PUBLIC AUTHORITIES(*a*): EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY PURPOSE
($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
General public services—						
General administration	250.2	291.7	309.7	320.9	354.1	392.0
External affairs	25.5	24.4	12.1	9.1	13.9	15.5
Law, order and public safety	85.2	108.8	124.6	150.8	153.8	147.3
General research	23.6	18.0	29.6	49.3	61.3	67.0
Education	640.6	717.0	731.2	659.4	651.0	650.3
Health	394.7	378.1	371.7	320.6	284.2	256.0
Social security and welfare	27.2	25.3	29.7	29.1	30.1	34.1
Housing and community amenities—						
Housing	338.8	347.0	274.4	280.3	359.8	357.6
Community and regional development	95.1	91.8	61.8	61.7	86.3	112.4
Protection of the environment	501.5	503.9	487.6	517.0	535.9	606.3
Community amenities	3.4	4.2	3.3	6.2	8.7	8.1
Recreation and culture	138.8	167.5	213.1	247.4	321.4	310.8
Economic services—						
Agriculture, forestry and fishing	203.4	223.0	208.7	217.0	248.7	264.8
Mining, manufacturing and construction	77.2	83.7	86.3	167.1	172.7	171.7
Electricity and gas	803.7	985.1	1,223.4	1,488.1	1,875.0	2663.2
Water supply	347.4	376.6	368.8	362.3	399.3	484.3
Rail transport(*b*)	348.3	426.2	486.1	505.8	549.5	743.1
Sea transport	233.0	255.9	200.3	161.0	272.4	375.0
Road systems and regulation	1,411.3	1,536.4	1,653.0	1,786.9	1,974.7	2138.8
Air transport	52.9	162.1	150.9	180.7	331.6	458.8
Pipelines	22.2	8.6	11.9	9.4	28.7	45.2
Other transport services, n.e.c.	34.7	46.9	48.6	54.4	56.6	66.7
Communications	855.4	913.6	905.0	976.9	1,171.3	1268.2
Other economic services(*c*)	76.4	87.8	79.9	123.5	114.0	148.7
Other purposes	2.8	8.7	4.0	24.1	28.7	35.4
Total	**6,993.2**	**7,792.0**	**8,076.0**	**8,705.9**	**10,083.5**	**11,821.0**

(*a*) Excludes financial enterprises. (*b*) Includes suburban rail transport system. (*c*) Includes general administration, regulation and research.

Main components of receipts

Taxes and net borrowing constitute the main sources of financing of the activities of the public authorities. Details of the debt of public authorities are given in the next section of this chapter. Taxation, by type of tax, for the years 1976–77 to 1981–82 was as follows.

ALL PUBLIC AUTHORITIES: TAXATION, BY TYPE OF TAX
($ million)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Income tax—						
Individuals	11,047	12,122	12,797	15,040	17,543	21,224
Companies(*a*)	2,899	3,190	3,116	3,501	4,800	5,215
Estate, gift, probate and succession duties	339	344	289	220	175	139
Customs duties	1,273	1,232	1,457	1,629	1,884	2,157
Excise duties	2,485	2,734	3,845	4,965	5,834	5,994
Sales tax	1,650	1,758	1,770	1,865	2,102	2,854
Primary production taxes	148	172	216	274	292	234
Payroll tax	1,325	1,438	1,540	1,707	1,937	2,411
Property taxes	1,285	1,392	1,507	1,667	1,881	2,123
Liquor taxes	123	143	158	177	206	235
Taxes on gambling	395	435	481	567	634	727
Taxes on ownership and operation of motor vehicles	653	729	796	772	849	1,031
Stamp duties, n.e.i.	672	708	806	1,000	1,250	1,355
Other taxes, fees, fines, etc.	518	563	622	829	968	1,218
Total	**24,811**	**26,959**	**29,398**	**34,213**	**40,354**	**46,916**

(*a*) Includes dividend and interest (withholding) taxes. Excludes income taxes paid by Commonwealth Government public enterprises.

Level of government

In the following tables details are given for 1981–82 of the outlay and receipts of all public authorities, broken down by level of government in order to show their relative contributions to various expenditure programs, and their roles in financing these programs through taxes and transfers.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY LEVEL OF GOVERNMENT, 1981–82

($ million)

	Commonwealth authorities	*State authorities*	*Local authorities*	*All public authorities*
OUTLAY				
Expenditure on goods and services—				
General public services—				
General administration, n.e.c.	1,376.2	1,146.0	631.2	3,153.4
External affairs	197.6	–	–	197.6
Law, order and public safety	251.9	1,719.0	–	1,971.5
General research	380.2	–	–	380.2
Defence	3,832.2	–	–	3,832.2
Education	349.8	7,821.2	16.0	8,187.0
Health	748.3	4,239.4	72.4	5,060.1
Social security and welfare	467.0	315.2	77.5	859.7
Housing and community amenities—				
Housing	–5.2	339.5	40.1	374.4
Community and regional development	36.2	137.3	47.8	221.3
Protection of the environment	10.6	440.6	345.1	796.3
Community amenities	1.4	0.9	27.1	29.4
Recreation and culture	441.1	330.0	487.5	1,258.6
Economic services—				
Agriculture, forestry and fishing	213.7	795.9	7.3	1,016.9
Mining, manufacturing and construction	37.6	242.6	26.4	306.6
Electricity, gas and water supply	10.7	2,813.8	338.0	3,162.5
Transport and communication	2,021.2	2,457.7	947.1	5,426.0
Other economic services	498.4	376.5	51.2	926.1
Other purposes	–	20.1	41.0	61.1
Total expenditure on goods and services	**10,868.7**	**23,196.4**	**3,155.9**	**37,221.0**
of which—				
Final consumption expenditure	8,710.4	15,435.1	1,254.5	25,400.0
Expenditure on new fixed assets	2,158.3	7,761.3	1,901.4	11,821.0
Increase in stocks	164.7	131.4	20.4	316.5
Expenditure on existing assets (net)	–264.3	–968.6	–4.4	–1,237.3
Transfer payments—				
Interest	3,137.6	3,191.9	435.2	5,020.3
Transfers to persons	13,343.3	322.8	–	13,666.1
Subsidies	947.6	147.6	–	1,095.2
Transfers overseas	668.2	0.1	–	668.3
Grants for private capital purposes	228.3	91.0	–	319.3
Grants to the States—for current purposes	10,934.8	–	43.9	(*b*)
—for capital purposes	1,679.5	–	12.6	(*b*)
Grants to the Northern Territory				
—for current purposes	448.9	–	–	(*b*)
—for capital purposes	90.3	–	–	(*b*)
Grants to local authorities	26.2	747.6	–	(*b*)
Total transfer payments	*31,504.7*	*4,500.9*	*491.7*	*20,769.5*
Net advances to—				
The private sector	82.5	74.7	3.7	160.9
Public financial enterprises	–14.9	59.8	–	44.9
The States	782.0	–	–	(*b*)
The Northern Territory	80.2	–	–	(*b*)
Local authorities	–	21.1	–	(*b*)
Overseas	–8.9	–	–	–8.9
Total net advances	*920.9*	*155.7*	*3.7*	*196.9*
Total outlay	**43,194.7**	**27,015.8**	**3,667.2**	**57,265.4**
of which—				
current outlay	38,208.4	19,557.7	1,733.5	45,848.8
capital outlay	4,986.3	7,458.1	1,933.7	11,416.6

(*a*) Excludes financial enterprises. (*b*) In consolidated figures for all public authorities, inter-authority grants and advances are not shown.

ALL PUBLIC AUTHORITIES(*a*): OUTLAY AND RECEIPTS BY LEVEL OF GOVERNMENT, 1981–82—*continued*

($ million)

	Commonwealth authorities	*State authorities*	*Local authorities*	*All public authorities*
RECEIPTS AND FINANCING ITEMS				
Receipts—				
Taxes, fees, fines, etc.—				
Income tax—				
Individuals	21,224.3	–	–	21,224.3
Companies(*b*)	5,214.7	–	–	5,214.7
Estate, gift, probate and succession duties	4.4	134.2	–	138.6
Customs duties	2,156.6	–	–	2,156.6
Excise duties	5,993.8	–	–	5,993.8
Sales tax	2,854.3	–	–	2,854.3
Payroll tax	16.0	2,394.8	–	2,410.8
Primary production taxes and charges	234.1	–	–	234.1
Property taxes	20.9	369.8	1,732.6	2,123.3
Liquor taxes	3.5	231.3	–	234.8
Taxes on gambling	–	726.9	–	726.9
Taxes on ownership and operation of motor vehicles	10.6	1,019.8	0.1	1,030.5
Stamp duties, n.e.i.	10.8	1,344.6	–	1,355.4
Departure Tax	36.1	–	–	36.1
Fees from regulatory services	65.3	89.3	–	154.6
Other taxes, fees, fines, etc.	145.3	793.5	88.3	1,027.1
Total taxes, etc.	*37,990.7*	*7,104.2*	*1,821.0*	*46,915.9*
Income from public enterprises	1,318.9	757.9	243.5	2,320.3
Property Income—				
Interest received—				
From the States and the Northern Territory	1,738.6	–	–	(*c*)
Other	273.9	805.9	194.2	1,274.0
Land rent, royalties, dividends	64.9	517.0	–	581.9
Grants from the Commonwealth Government—				
For current purposes	–	11,382.0	–	(*c*)
For capital purposes	–	1,769.8	–	(*c*)
Direct grants from Commonwealth Government to local authorities	–	–	29.1	(*c*)
Grants from State authorities	–	–	747.6	(*c*)
Grants from local authorities	–	56.5	–	(*c*)
Total receipts	**41,387.0**	**22,393.3**	**3,035.4**	**51,092.0**
Financing items—				
Net borrowing—				
Treasury bills and notes	−347.4	–	–	−347.4
Commonwealth Government securities	693.2	–	–	693.2
Local authorities and public corporation securities	399.9	2,365.7	290.2	3,055.8
Other general government securities	–	408.1	–	408.1
Total net borrowing	*745.7*	*2,773.8*	*290.2*	*3,809.7*
Advances from the Commonwealth Government—				
For loan works purposes	–	730.4	–	(*c*)
Other	–	131.7	–	(*c*)
Advances from State authorities	–	–	21.1	(*c*)
Funds provided for or received from I.M.F.	0.3	–	–	0.3
Net receipts of private trust funds	385.6	262.6	−19.4	628.8
Reduction in cash and bank balances	−83.3	−474.9	−70.3	−628.5
Reduction in security holdings	113.9	−34.7	−1.1	78.1
Other funds available (including errors and omissions)—				
Depreciation allowances	754.1	631.1	102.4	1,487.6
Other	−108.6	596.7	308.9	797.0
Total financing items	**1,807.7**	**4,616.8**	**631.8**	**6,173.0**
Total funds available	**43,194.7**	**27,010.1**	**3,667.2**	**57,265.4**

(*a*) Excludes financial enterprises. (*b*) Includes dividend, interest and mining (withholding) taxes. Excludes income taxes paid by Commonwealth Government public enterprises. (*c*) In consolidated figures for all public authorities, inter-authority grants and advances are not shown.

PUBLIC SECTOR BORROWING

Figures given in this section do not purport to show either 'public debt' or 'net public debt', but are designed to provide details of securities issued on behalf of the Commonwealth Government and the States, together with some details of the amounts borrowed by State and local authorities with independent borrowing powers.

For a number of reasons, this information cannot be aggregated, without adjustment, to provide a measure of the 'debt' of public authorities. There are forms of debt not evidenced by the issue of securities, such as Commonwealth Government advances to the States for specific capital purposes. Governments themselves maintain significant holdings of their own securities; for example, the Commonwealth Government, in the National Debt Sinking Fund, the Loan Consolidation and Investment Reserve, and in other Trust Funds, holds large investments in securities issued either directly by itself or on behalf of the States. Some of the securities issued on behalf of the States and held by the Commonwealth Government represent the proceeds of overseas loans, securities for which were issued directly by the Commonwealth Government, the Australian currency counterpart proceeds of the loans being invested in special loans to finance State works programs. A number of State public corporations and local authorities also maintain significant investments in government securities (including their own securities). Aggregation of the figures for securities on issue which follow would clearly involve a substantial degree of duplication; the sum of securities on issue therefore cannot be regarded as representing 'net public debt'.

Commonwealth Government and States: Government securities on issue

Under the 1927 Financial Agreement between the Commonwealth Government and the States, the Commonwealth Government accepted responsibility for the securities of State governments then on issue and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth Government securities for all moneys borrowed.

A National Debt Sinking Fund, which is administered by the National Debt Commission, was established by the *National Debt Sinking Fund Act* 1923 for the redemption of securities issued on behalf of the Commonwealth Government. Under the terms of the Financial Agreement, the sinking funds existing in respect of the States' debts were also placed under the control of the Commission. The Commonwealth Government is reimbursed by the States for interest, exchange, etc. paid on their behalf, and the securities are redeemed from the Fund to which both the Commonwealth and the State governments make pre-determined contributions. The amounts to be contributed were varied when the *National Debt Sinking Fund Act* 1966 repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth Government, and again in 1976 when the Act was amended to reflect the amendments to the Financial Agreement. In 1976 the Commonwealth assumed the responsibility for over $1,000 million of States' debt existing as at 30 June 1975. As a consequence, the separate States' Sinking Funds were absorbed into the National Debt Sinking Fund, with separate accounts being maintained for the Commonwealth and each State.

For further information relating to the recent operations of the National Debt Sinking Fund reference should be made to the fifty-seventh annual report of the National Debt Commission. Particulars of the creation and operation of sinking funds by the *National Debt Sinking Fund Act* 1923 are included in issues of the Year Book prior to No. 23, and a general description of the provisions applying between 1966 and 1976 is given in issue No. 61.

In the tables which follow, details are given of transactions in Commonwealth Government securities issued on account of the Commonwealth Government and the States. Amounts relating to overseas loans are shown in Australian currency equivalent calculated on the basis of the rates of exchange ruling at 30 June in each year shown. All amounts shown are at face value.

For figures which permit accurate analysis of the structure and movement of securities issued on behalf of the Commonwealth and States, refer to the Commonwealth Budget Paper No. 8, *Government Securities on Issue.*

Net movement in securities on issue

Summary details of the net movement in securities issued for Commonwealth Government purposes and on account of the States during the period 1977–78 to 1982–83, are given in the following group of tables.

NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE

($ million)

NEW SECURITIES ISSUED

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Securities repayable in Australian currency						
Treasury bonds	965.7	1,018.5	1,485.7	2,774.7	3,385.8	6,253.8
Australian savings bonds	719.6	531.2	806.1	2,024.0	1,312.9	4,204.6
Special bonds	–	–	–	–	–	–
Income equalization deposits	–	33.1	73.5	72.0	57.6	55.6
Drought bonds	–	–	–	–	–	
Advance loan subscriptions	(*a*)0.4	(*a*)–4.6	–	–	–	
Overdue securities	–	–	–	–	–	–
Tax-free stock	–	–	–	–	–	–
Debentures	–	–	–	–	–	–
Stock issued to Government savings banks under special agreements(*b*)	57.9	35.8	36.5	54.6	53.3	61.9
Treasury notes	1,766.7	4,245.1	7,870.4	12,058.1	12,594.5	–
Treasury bills						
Internal	(*a*)365.2	(*a*)–187.7	141.8	2,234.2	1,718.0	–
Public	(*a*)200.0	(*a*)500.0	500.0	14,706.0	14,200.0	–
Total	*4,075.5*	*6,171.3*	*10,913.9*	33,923.6	33,322.1	10,575.9
Securities repayable in overseas currencies(*c*)	1,738.3	1,453.8	482.1	178.2	831.3	1,077.0
Total new securities issued	**5,813.9**	**7,625.1**	**11,396.0**	**34,101.8**	**34,153.4**	**11,652.9**

REDEMPTIONS, REPURCHASES, CANCELLATIONS(*d*)

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Securities repayable in Australian currency						
Treasury bonds	114.6	222.6	1,035.6	2,587.1	2,317.0	3,117.0
Australian savings bonds	174.8	164.4	586.2	2,093.4	1,913.9	1,736.8
Special bonds	133.3	72.7	44.6	251.4	122.8	71.0
Income equalization deposits	–	20.4	16.4	45.1	55.2	65.8
Drought bonds	0.6	0.2	0.2	0.1	0.1	–
Advance loan subscriptions	–	–	–	–	–	–
Overdue securities	0.8	1.8	0.6	–1.5	–3.3	8.2
Tax-free stock	0.1	0.3	–	–	0.9	0.1
Debentures	3.7	3.8	4.0	4.2	4.4	3.3
Stock issued to Government savings banks under special agreements(*b*)	6.6	9.6	6.3	6.4	5.6	5.8
Treasury notes	1,773.3	3,198.3	7,665.2	10,145.9	12,441.9	44.2
Treasury bills						
Internal	–	–	–	2,888.3	1,509.7	152.2
Public	–	–	–	15,306.0	14,700.0	1,400.0
Total	*2,207.8*	*3,694.2*	*9,359.1*	*33,326.4*	*33,068.1*	*6,604.5*
Securities repayable in overseas currencies(*c*)	–26.3	–165.7	340.4	922.5	131.3	1,523.9
Total redemptions, etc.	**2,181.4**	**3,528.5**	**9,699.5**	**34,248.9**	**33,199.4**	**8,128.4**

NET MOVEMENT

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Securities repayable in Australian currency						
Treasury bonds	851.1	795.9	450.1	187.6	1,068.8	3,136.8
Australian savings bonds	544.8	366.8	219.9	–69.4	–601.0	2,467.8
Special bonds	–133.3	–72.7	–44.6	–251.4	–122.8	–71.0
Income equalization deposit	–	12.7	57.1	26.9	2.4	–10.2
Drought bonds	–0.6	–0.2	–0.2	–0.1	–0.1	–
Advance loan subscriptions	0.4	–4.6	–	–	–	–
Overdue securities	–0.8	–1.8	–0.6	1.5	3.3	–8.2
Tax-free stock	–0.1	–0.3	–	–	–0.9	–0.1
Debentures	–3.7	–3.8	–4.0	–4.2	–4.4	–3.3
Stock issued to Government savings banks under special agreements(*b*)	51.3	26.2	30.2	48.2	47.7	56.1
Treasury notes	–6.5	1,046.8	205.2	1,912.2	152.6	–44.2
Treasury bills						
Internal	365.2	–187.7	141.8	–654.1	208.3	–152.2
Public	200.0	500.0	500.0	–600.0	–500.0	–1,400.0
Total	*1,867.8*	*2,477.2*	*1,554.8*	*597.2*	*254.0*	*3,971.4*
Securities repayable in overseas currencies(*c*)	1,764.7	1,619.5	141.7	–744.3	700.0	–446.9
Net movement in securities on issue	**3,632.4**	**4,096.7**	**1,696.5**	**–147.1**	**954.0**	**3,524.5**

(*a*) Net issue. (*b*) Recorded in Commonwealth Government Loan Fund as State domestic raisings. (*c*) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. (*d*) Includes conversions from one type of security to another, which affect the net movements of individual loan categories, but do not affect the overall net movement.

NOTE: For securities repayable in overseas currencies the amounts shown also include an element due to exchange rate variations in Securities on Issue.

Government securities on issue.

The following table provides details of government securities on issue on account of the Commonwealth Government and the States, repayable in Australian and in overseas currencies.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH GOVERNMENT AND STATES

($ million)

	30 June					
	1978	*1979*	*1980*	*1981*	*1982*	*1983*
For Commonwealth Government purposes—						
Repayable in Australian currency—						
Treasury bonds	4,949.3	5,269.8	5,523.6	5,037.4	5,570.0	8,307.7
Australian savings bonds	1,669.3	1,700.5	1,496.0	1,215.7	381.2	2,633.9
Special bonds	110.3	93.8	75.9	30.4	11.1	1.3
Income equalization deposit	–	79.4	136.4	163.3	165.7	155.5
Drought bonds	0.8	0.5	0.4	0.3	0.2	0.1
Advance loan subscriptions	4.6	–	–	–	–	–
Overdue securities	5.3	3.5	3.0	4.4	7.8	6.8
Treasury notes	363.1	1,409.9	1,615.2	3,527.4	3,680.0	3,635.8
Treasury bills						
Internal	1,856.2	1,668.5	1,810.3	1,156.2	1,364.5	1 212.3
Public	1,500.0	2,000.0	2,500.0	1,900.0	1,400.1	–
Total	*10,458.9*	*12,225.9*	*13,160.8*	*13,035.1*	*12,580.4*	*15,953.4*
Repayable in overseas currencies(*a*)	3,533.1	5,178.9	5,326.4	4,618.7	5,335.7	6,905.2
Total Commonwealth Government	*13,991.9*	*17,404.8*	*18,487.2*	*17,653.8*	*17,916.1*	*22,858.5*
On account of States—						
Repayable in Australian currency—						
Treasury bonds	11,185.3	11,660.6	11,856.8	12,530.7	13,067.0	13,464.2
Australian savings bonds	624.3	959.8	1,384.2	1,595.2	1,828.7	2,038.9
Special bonds	484.9	428.7	402.0	196.0	92.5	30.6
Tax-free stock	15.0	14.8	14.7	14.7	13.9	13.8
Stock issued to Government savings banks under special agreements	499.3	525.5	555.7	603.9	651.6	707.8
Debentures	19.8	15.9	11.9	7.7	3.3	–
Overdue securities	0.1	0.1	–	–	–	0.2
Total	*12,828.6*	*13,605.4*	*14,225.4*	*14,948.2*	*15,657.0*	*16 255.5*
Repayable in overseas currencies(*a*)	102.2	75.9	70.0	33.3	16.3	13.9
Total States	*12,930.8*	*13,681.3*	*14,295.3*	*14,981.5*	*15,673.3*	*16 269.4*
of which—						
New South Wales	4,222.6	4,466.3	4,666.8	4,885.4	5,108.1	5,327.9
Victoria	3,244.3	3,427.6	3,584.9	3,758.1	3,932.4	4,045.3
Queensland	1,753.9	1,856.0	1,931.8	2,022.4	2,113.0	2,198.7
South Australia	1,602.7	1,701.5	1,781.1	1,871.1	1,961.9	2,035.2
Western Australia	1,237.3	1,307.3	1,360.7	1,423.8	1,486.3	1,547.8
Tasmania	870.0	922.6	969.9	1,020.8	1,071.6	1,114.4
Total Commonwealth Government and States	**26,922.7**	**31,086.0**	**32,782.6**	**32,635.4**	**33,589.4**	**39,127.9**

(*a*) Australian currency equivalent.

State and local authorities' borrowings

The borrowings of Commonwealth, State and local authorities come within the purview of the Loan Council under a 'gentlemen's agreement' originating in 1936. The Loan Council determines maximum interest rates and other terms and conditions of loans raised by authorities and approves the aggregate annual borrowing program for authorities borrowing more than $1.5 million in the financial year. The total program approved is distributed by the Council between the States, and each State determines the distribution between individual authorities of its share of the overall borrowing program approved for such authorities. Authorities which individually borrow less than $1.5 million in the financial year are also subject to the terms and conditions applying under the 'gentlemen's agreement', and it is the responsibility of the States to ensure that these authorities conform with these terms and conditions. No aggregate annual limit on their borrowings is imposed by the Loan Council.

The following table shows the aggregate borrowings by the State and local authorities in each of the years 1976–77 to 1981–82. It will be seen that the amounts borrowed by local authorities vary between the States, reflecting a number of factors including, importantly, variations between the States in the range of services provided by local government authorities. For example, the high figures for Queensland reflect, in part, borrowings by the Brisbane City Council which carries out a number of functions (e.g. metropolitan bus services and sewerage services) which in other States are undertaken by State authorities.

For further information relating to the figures given in the table, reference should be made to the Commonwealth Budget Paper No. 7, *Payments to or for the States, the Northern Territory and Local Government Authorities.*

NEW MONEY BORROWINGS BY STATE AND LOCAL AUTHORITIES
($'000)

	New South Wales	*Victoria*	*Queens-land*	*South Australia*	*Western Australia*	*Tasmania*	*Total*
			STATE AUTHORITIES(*a*)				
1976–77	253,883	326,717	127,517	50,100	54,019	21,432	833,668
1977–78	332,215	388,620	198,721	73,220	78,689	30,771	1,102,236
1978–79	371,800	412,756	194,726	83,953	111,081	34,139	1,208,455
1979–80	472,761	382,657	235,264	56,830	108,593	34,445	1,290,550
1980–81	472,761	382,657	223,264	56,812	117,358	44,445	1,297,252
1981–82	472,761	402,657	223,264	56,828	101,612	34,445	1,291,567
			LOCAL AUTHORITIES(*b*)				
1976–77	191,932	65,893	116,118	21,674	32,380	17,053	445,050
1977–78	202,230	84,493	117,993	19,424	36,481	17,405	478,026
1978–79	215,641	81,795	126,709	24,621	39,286	17,841	505,893
1979–80	235,407	90,702	147,948	26,604	40,336	15,426	556,423
1980–81	251,261	95,769	154,245	25,087	42,354	15,120	583,836
1981–82	189,700	84,149	155,920	23,943	39,522	12,654	505,888

(*a*) New money borrowings by State-type authorities in the Northern Territory in 1981–82 were $26,000,000. (*b*) New money borrowings by local authorities in the Northern Territory are not included in the table. These borrowings are as follows: 1976–77, $1,194,000; 1977–78, $1,697,000; 1978–79, $631,000; 1979–80, $1,240,000; 1980–81, $842,000; 1981–82, $1,318,000.

Additional details of the transactions of public authorities engaged in particular fields of activity, such as defence, transport and communication, health and welfare, education, etc., may be found in other chapters of this Year Book.

BIBLIOGRAPHY

ABS publications

Monthly Summary of Statistics, Australia (1304.0);
Digest of Current Economic Statistics, Australia (1305.0);
Australian National Accounts, National Income and Expenditure (5204.0);
Quarterly Estimates of National Income and Expenditure, Australia (5206.0);
Government Financial Estimates, Australia (5501.0);
Commonwealth Government Finance (5502.0);
State and Local Government Finance, Australia (5504.0) and Taxation Revenue, Australia (5506.0).

CHAPTER 23

NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the ABS since 1944–45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. (Other national accounting publications are also produced regularly. A list of these can be found at the end of this chapter.)

NATIONAL INCOME AND EXPENDITURE

Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian national accounts reference should be made to *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

Gross domestic product is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus, gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. *Gross farm product* is that part of gross domestic product which derives from production in agriculture and services to agriculture. *Gross non-farm product* arises from production in all other industries.

Gross domestic product at factor cost is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross domestic product less net indirect taxes.

Domestic factor incomes is that part of the value added within a given period by factors of production (labour, land, capital and enterprise) which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to gross domestic product at factor cost less depreciation allowances.

National income is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital and enterprise) in Australia or overseas plus indirect taxes less subsidies. It is equivalent to domestic factor incomes plus indirect taxes less subsidies and net income paid overseas.

National disposable income is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from net transfers from overseas. It is equivalent to national income less net transfers overseas plus net withholding taxes received from overseas.

Gross national expenditure is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to the gross domestic product plus imports of goods and services less exports of goods and services.

Household income is the total income, whether in cash or kind, received by persons normally resident in Australia in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). It includes the imputed interest of life offices and superannuation funds, which is the benefit accruing to policy holders and members from investment income of the funds. It also includes third party motor vehicle and public risk insurance claims paid to persons in respect of policies taken out by enterprises. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income. It also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc.

The relationship between these aggregates (other than household income) are illustrated in the following diagram.

RELATIONSHIP OF MAIN IDENTITIES

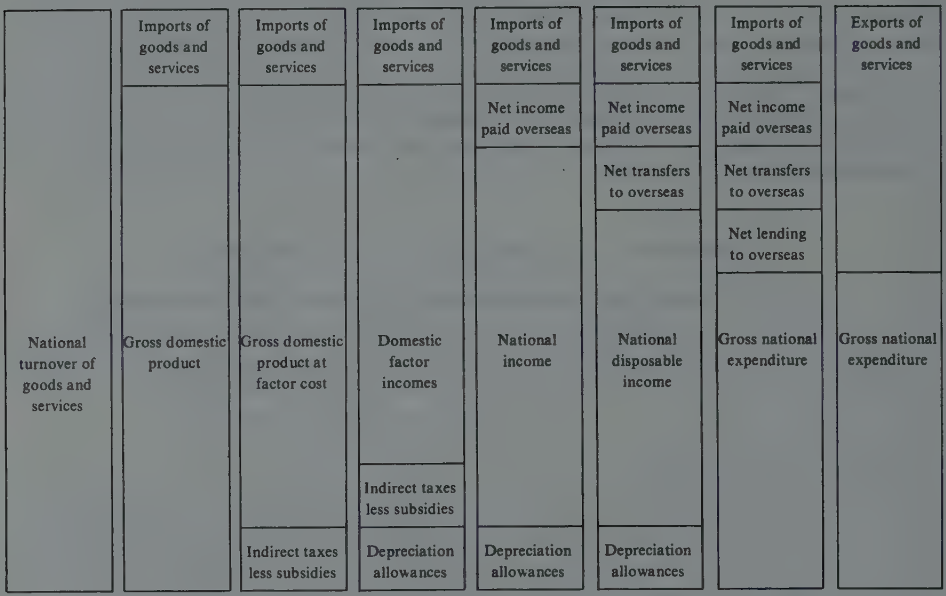

National turnover of goods and services
Imports of goods and services
Gross domestic product
Imports of goods and services
Gross domestic product at factor cost
Indirect taxes less subsidies
Imports of goods and services
Domestic factor incomes
Indirect taxes less subsidies
Depreciation allowances
Imports of goods and services
Net income paid overseas
National income
Depreciation allowances
Imports of goods and services
Net income paid overseas
Net transfers to overseas
National disposable income
Depreciation allowances
Imports of goods and services
Net income paid overseas
Net transfers to overseas
Net lending to overseas
Gross national expenditure
Exports of goods and services
Gross national expenditure

PLATE 46

Framework of accounts and sectors

In the Australian national accounts, four internal sectors are distinguished: corporate trading enterprises (including public trading enterprises), financial enterprises (including the nominal industry), households (including their unincorporated enterprises) and general government. All of these internal sectors engage in productive activity, receive and disburse income and accumulate assets. In this publication no accounts are shown for individual internal sectors. The transactions of the internal sectors are summarised in three accounts: a domestic production account (Table 1, page 583), a national income and outlay account (Table 3, page 584) and a national capital account (Table 4, page 585). In addition, there is an overseas sector having an account (Table 6, page 585) which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents.

The framework of sectors and accounts underlying the Australian national accounts is set out in the following diagram. The heavy rectangles depict the minimum system of four accounts which represent the consolidated accounts of the nation. The light rectangles represent the accounts for institutional sectors. The subdivision of the domestic production account represents production accounts for establishments classified according to industry. Selected transactions from such production accounts are shown in *Australian National Accounts, National Income and Expenditure* (5204.0). Such production accounts can be developed in detail to produce input-output tables.

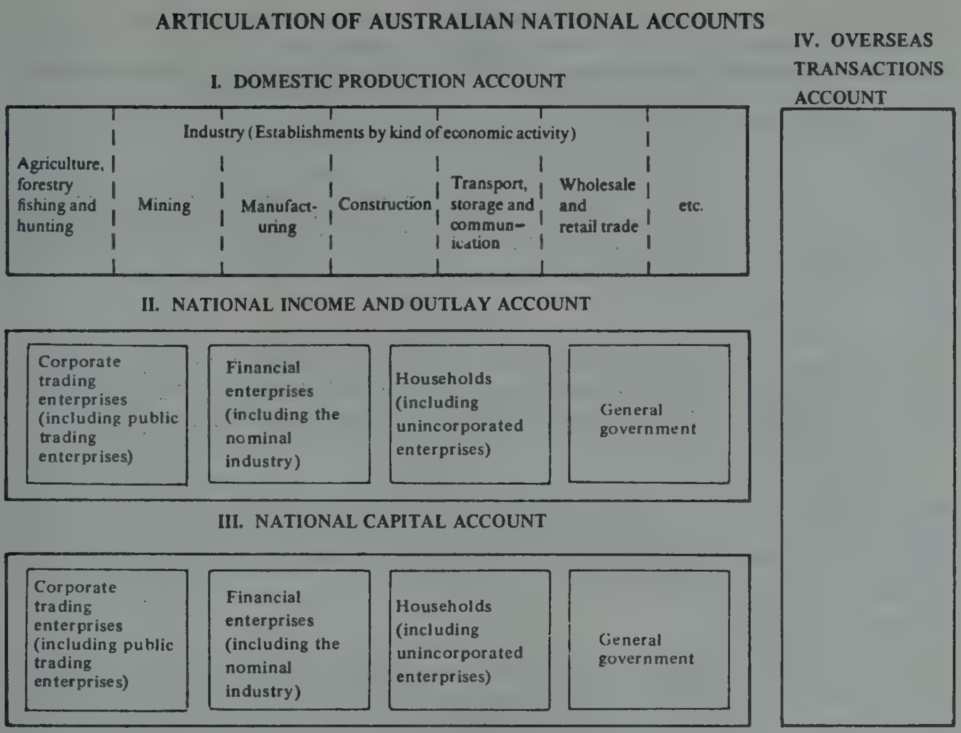

ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS
I. DOMESTIC PRODUCTION ACCOUNT
Industry (Establishments by kind of economic activity)
Agriculture, forestry fishing and hunting
Mining
Manufacturing
Construction
Transport, storage and communication
Wholesale and retail trade
etc.
II. NATIONAL INCOME AND OUTLAY ACCOUNT
Corporate trading enterprises (including public trading enterprises)
Financial enterprises (including the nominal industry)
Households (including unincorporated enterprises)
General government
III. NATIONAL CAPITAL ACCOUNT
Corporate trading enterprises (including public trading enterprises)
Financial enterprises (including the nominal industry)
Households (including unincorporated enterprises)
General government
IV. OVERSEAS TRANSACTIONS ACCOUNT

PLATE 47

Description of the accounts

The *domestic production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which may be divided into depreciation allowances and net operating surplus. Depreciation allowances is carried to the national capital account (or the sector capital accounts) and net operating surplus, together with wages and salaries and indirect taxes less subsidies, is carried to the national income and outlay account (or sector income and outlay accounts). In input-output tables, the domestic production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *national income and outlay account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the domestic production account. From this income are deducted net payments of income and miscellaneous transfers to overseas; the remainder is the national disposable income. The outlay side of the account shows that this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The national income and outlay account is a consolidation of the sector income and outlay accounts.

The *national capital account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the domestic production account and saving transferred from the national income and outlay account (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on current transactions in the overseas transactions account.

The *overseas transactions account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the overseas sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of Australia's exports of goods and services, property income received from overseas, transfers from overseas and withholding taxes from overseas. These receipts are used for Australia's imports of goods and services and payments of property income and transfers to overseas; the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas, and negative net lending corresponds to a deficit. The transactions in property income shown in this account differ from estimates shown in balance of payments statistics because, in the national accounts, undistributed company income is not imputed to the beneficial owners. For this reason, net lending to overseas differs from the balance on current account shown in balance of payments statistics.

Estimates at constant prices

For certain kinds of intertemporal comparison, it is desirable to derive measures which attempt to remove the direct effect of price changes during the periods under review. Such estimates, conventionally described as 'at constant prices', are presented in Tables 2 and 5 (pages 583 and 585 respectively) for gross domestic product, exports and imports of goods and services, and gross national expenditure and its principal components.

Chapter 4 of *Australian National Accounts, Concepts, Sources and Methods* (5216.0) contains a discussion of the conceptual problems involved in making these estimates. Chapter 12 of that publication contains a brief account of the sources and methods used in preparing the estimates.

It should be noted that estimates at constant prices involve approximations and assumptions, and care must be taken in the interpretation and use of results.

Reliability and revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly and some of which is available only after a delay of several years. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision. This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation, and part of private gross fixed capital expenditure—which are subject to substantial revisions for the last one or two years because tabulations of income tax statistics become available progressively one to two years after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data.

National income and expenditure tables

NOTE. Items in all current price tables are numbered from 1 to 26, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries. A description of the numbered items can be found in *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

The figures shown in Tables 1-6 are as published in *Budget Paper No. 10, National Income and Expenditure, 1982–83* (5213.0). The figures shown in Table 7 are consistent with those published in *Quarterly Estimates of National Income and Expenditure, Australia, June Quarter 1983* (5206.0).

TABLE 1

DOMESTIC PRODUCTION ACCOUNT

($ million)

		1980–81	*1981–82*	*1982–83*
	Final consumption expenditure—			
1	Private	78,913	89,415	100,249
2	Government	22,139	25,351	28,742
	Gross fixed capital expenditure—			
3	Private	21,724	26,936	24,602
4	Public enterprises	5,644	6,070	7,800
5	General government	4,461	4,822	5,632
6	Increase in stocks	209	1,146	−2,515
7	Statistical discrepancy	475	93	−201
	Gross national expenditure	*133,565*	*153,833*	*164,309*
8	Exports of goods and services	22,002	22,663	24,559
9	*Less* Imports of goods and services	24,750	28,558	27,976
	Expenditure on gross domestic product	**130,817**	**147,938**	**160,892**
10	Wages, salaries and supplements	71,736	82,722	91,338
	Gross operating surplus—			
	Trading enterprises—			
11*a*	Companies	15,901	16,853	16,663
11*b*	Unincorporated enterprises	15,096	16,162	14,983
11*c*	Dwellings owned by persons	8,933	10,494	12,846
11*d*	Public enterprises	2,924	3,273	3,823
11*e*	Financial enterprises	3,374	3,771	4,282
11*f*	*Less* Imputed bank service charge	3,286	3,798	4,078
	Gross domestic product at factor cost	*114,678*	*129,477*	*139,857*
12	Indirect taxes *less* subsidies	16,139	18,461	21,035
	Gross domestic product	**130,817**	**147,938**	**160,892**
	Gross farm product	7,091	7,257	5,611
	Gross non-farm product	123,726	140,681	155,281

TABLE 2

EXPENDITURE ON GROSS DOMESTIC PRODUCT AT AVERAGE 1979–80 PRICES

($ million)

	1980–81	*1981–82*	*1982–83*
Final consumption expenditure—			
Private	72,211	74,832	75,394
Government	19,723	19,964	20,583
Gross fixed capital expenditure—			
Private	19,584	22,077	18,071
Public	9,016	8,646	9,459
Increase in stocks	329	1,197	−1,919
Statistical discrepancy	466	140	−118
Gross national expenditure	*121,329*	*126,856*	*121,470*
Exports of goods and services	20,404	20,603	20,882
Less Imports of goods and services	22,817	25,569	22,940
Expenditure on gross domestic product	**118,916**	**121,890**	**119,412**
Gross farm product	6,615	7,682	6,323
Gross non-farm product	112,301	114,208	113,089

TABLE 3

NATIONAL INCOME AND OUTLAY ACCOUNT

($ million)

		1980–81	*1981–82*	*1982–83*
10	Wages, salaries and supplements	71,736	82,722	91,338
11*g*	Net operating surplus	33,770	36,335	36,617
	Domestic factor incomes	*105,506*	*119,057*	*127,955*
13	*Less* Net income paid overseas	1,855	2,560	2,723
12*a*	Indirect taxes	17,136	19,538	22,301
12*b*	*Less* Subsidies	997	1,077	1,266
	National income	*119,790*	*134,958*	*146,267*
14	*Less* Net transfers to overseas	355	427	349
15*g*	Withholding taxes from overseas	161	205	258
	National disposable income	**119,596**	**134,736**	**146,176**
	Final consumption expenditure—			
1	Private	78,913	89,415	100,249
2	Government	22,139	25,351	28,742
15 to 19, 26	Saving	18,544	19,970	17,185
	Disposal of income	**119,596**	**134,736**	**146,176**

TABLE 4

NATIONAL CAPITAL ACCOUNT

($ million)

		1980–81	*1981–82*	*1982–83*
11*h*	Depreciation allowances	9,172	10,420	11,902
	Saving—			
15	Increase in income tax provisions	641	−66	−464
16	Undistributed (company) income	2,241	1,527	697
17	Retained income of public financial enterprises	441	359	238
18	Household saving	11,032	12,847	13,703
19	General government surplus on current transactions	4,489	5,303	2,811
26	Extraordinary insurance claims paid	..	..	200
	Finance of gross accumulation	**27,716**	**30,390**	**29,087**
	Gross fixed capital expenditure—			
	Private—			
3*a*	Dwellings	6,111	6,663	5,464
3*b*	Non-dwelling construction	3,824	5,001	5,125
3*c*	Equipment	11,789	15,272	14,013
4	Public enterprises	5,644	6,070	7,800
5	General government	4,461	4,822	5,632
	Total gross fixed capital expenditure	*31,829*	*37,828*	*38,034*
	Increase in stocks—			
6*a*	Private non-farm	584	664	−2,387
6*b*	Public authority	211	328	524
6*c*	Farm	−586	154	−652
7	Statistical discrepancy	475	93	−201
21	Net lending to overseas	−4,797	−8,677	−6,231
	Gross accumulation	**27,716**	**30,390**	**29,087**

TABLE 5

GROSS FIXED CAPITAL EXPENDITURE AND INCREASE IN STOCKS AT AVERAGE 1979–80 PRICES

($ million)

	1980–81	*1981–82*	*1982–83*
Gross fixed capital expenditure—			
Private—			
Dwellings	5,439	5,284	3,942
Non-dwelling construction	3,409	3,946	3,559
Equipment	10,736	12,847	10,570
Total private	*19,584*	*22,077*	*18,071*
Public	9,016	8,646	9,459
Total	**28,600**	**30,723**	**27,530**
Increase in stocks—			
Private non-farm	552	560	−1,771
Public authority	186	281	433
Farm	−409	356	−581
Total	**329**	**1,197**	**−1,919**

TABLE 6

OVERSEAS TRANSACTIONS ACCOUNT

($ million)

		1980–81	*1981–82*	*1982–83*
9*a*	Imports f.o.b.	19,169	22,374	21,528
9*b*	Transportation	3,355	3,743	3,726
9*c*	Travel	1,561	1,696	1,868
9*d*	Government transactions	287	321	362
9*e*	Other goods and services	378	424	492
9	*Imports of goods and services*	*24,750*	*28,558*	*27,976*
13*a*	Property income to overseas	2,387	3,079	3,534
14*a*	Personal transfers overseas	439	491	562
14*b*	General government transfers overseas	627	734	806
21	Net lending to overseas	−4,797	−8,677	−6,231
	Use of current receipts	**23,406**	**24,185**	**26,647**
8*a*	Exports f.o.b.	18,718	19,089	20,697
8*b*	Transportation	2,013	2,095	2,192
8*c*	Travel	898	1,030	1,157
8*d*	Government transactions	126	161	191
8*e*	Other goods and services	247	288	322
8	*Exports of goods and services*	*22,002*	*22,663*	*24,559*
13*b*	Property income from overseas	532	519	811
14*c*	Personal transfers from overseas	711	798	979
14*d*	Extraordinary insurance claims	. .	. .	40
15*g*	Withholding taxes	161	205	258
	Current receipts from overseas	**23,406**	**24,185**	**26,647**

TABLE 7

MAIN AGGREGATES AT CURRENT PRICES, 1959–60 TO 1982–83

($ million)

	1	2	3	4	5	6	7 (1 to 6)
	Final consumption expenditure		*Private gross fixed capital expenditure*	*Public gross fixed capital expenditure*	*Increase in stocks*	*Statistical discrepancy*	*Gross national expenditure*
Year	*Private*	*Government*					
1959–60	9,049	1,302	2,191	1,214	168	−35	13,889
1960–61	9,601	1,409	2,415	1,256	478	−107	15,052
1961–62	9,887	1,528	2,328	1,380	−219	−190	14,714
1962–63	10,599	1,605	2,580	1,434	253	−160	16,311
1963–64	11,437	1,771	2,913	1,586	120	−146	17,681
1964–65	12,366	2,056	3,398	1,852	561	−26	20,207
1965–66	13,149	2,371	3,657	2,066	109	−87	21,265
1966–67	14,207	2,708	3,825	2,184	360	−189	23,095
1967–68	15,499	3,175	4,164	2,369	113	−324	24,996
1968–69	16,795	3,299	4,730	2,525	682	−78	27,953
1969–70	18,498	3,665	5,161	2,745	440	58	30,567
1970–71	20,428	4,196	5,837	2,936	446	−46	33,797
1971–72	22,690	4,787	6,330	3,295	11	178	37,291
1972–73	25,452	5,450	6,684	3,484	−285	525	41,310
1973–74	30,086	6,841	7,764	3,980	1,170	1,490	51,331
1974–75	36,514	9,214	8,536	5,653	1,016	1,148	62,081
1975–76	43,630	11,456	10,331	6,699	111	424	72,651
1976–77	49,954	13,390	11,818	7,136	1,134	313	83,745
1977–78	55,388	15,105	12,670	7,945	−467	727	91,368
1978–79	62,289	16,734	15,034	8,151	1,264	−27	103,445
1979–80	69,834	18,696	16,650	8,833	594	−516	114,091
1980–81	78,913	22,139	21,724	10,105	209	475	133,565
1981–82	89,415	25,351	26,936	10,892	1,146	93	153,833
1982–83	100,249	28,742	24,602	13,432	−2,515	−201	164,309

	8	9	10 (7+8–9)	11	12	13	14
Year	*Exports of goods and services*	*Imports of goods and services*	*Gross domestic product*	*Gross domestic product at factor cost*	*National income*	*Household income*	*Wages, salaries and supplements*
1959–60	2,142	2,285	13,746	12,271	12,476	10,851	6,961
1960–61	2,166	2,601	14,617	13,046	13,219	11,660	7,500
1961–62	2,458	2,204	14,968	13,433	13,494	12,109	7,748
1962–63	2,481	2,610	16,182	14,539	14,590	12,900	8,202
1963–64	3,150	2,860	17,971	16,199	16,232	14,321	8,948
1964–65	3,035	3,473	19,769	17,809	17,859	15,665	10,035
1965–66	3,122	3,617	20,770	18,626	18,669	16,467	10,845
1966–67	3,468	3,695	22,868	20,595	20,549	18,246	11,850
1967–68	3,549	4,134	24,411	21,930	21,867	19,189	12,911
1968–69	3,877	4,268	27,562	24,821	24,766	21,587	14,303
1969–70	4,736	4,758	30,545	27,522	27,436	23,821	16,079
1970–71	5,032	5,092	33,737	30,449	30,438	26,669	18,447
1971–72	5,605	5,216	37,680	33,985	34,096	30,163	20,575
1972–73	6,945	5,348	42,907	38,665	39,034	34,611	22,966
1973–74	7,810	7,775	51,366	46,013	47,301	42,524	28,127
1974–75	9,920	10,228	61,773	55,124	57,028	52,910	36,115
1975–76	11,005	10,830	72,826	64,267	67,146	61,834	41,580
1976–77	13,208	13,788	83,165	73,427	76,519	70,699	46,926
1977–78	13,980	15,008	90,340	80,019	82,938	77,984	51,530
1978–79	16,502	17,784	102,163	90,191	93,773	86,923	55,446
1979–80	21,585	20,919	114,757	100,687	105,144	96,578	61,720
1980–81	22,002	24,750	130,817	114,678	119,790	110,054	71,736
1981–82	22,663	28,558	147,938	129,477	134 958	126 720	82 722
1982–83	24,559	27,976	160,892	139,857	146,267	140,679	91,338

BIBLIOGRAPHY

ABS publications

Australian National Accounts, National Income and expenditure (advance release) (annual) (5201.0).

Australian National Accounts, National income and expenditure (annual) (5204.0).

Quarterly estimates of national income and expenditure (June quarter only) (5205.0)

Quarterly estimates of national income and expenditure (5206.0).

Australian National Accounts, Gross product by industry (annual) (5211.0).

Budget Paper No. 10, National income and expenditure (annual) (5213.0).

CHAPTER 24

OVERSEAS TRANSACTIONS

This chapter includes statistics of foreign trade, balance of payments, foreign investment by private investors; and foreign ownership and control of enterprises in Australia. Because of limitations of space, the statistics are mainly restricted to summarised form.

FOREIGN TRADE

Constitutional provisions and legislation

Constitutional provisions

By the Commonwealth of Australia Constitution Act, section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Australian Parliament. Under section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution.

Commonwealth Government Legislation

Commonwealth Government legislation affecting overseas trade includes the *Customs Act* 1901, the *Customs Tariff Act* 1982 and the *Customs Tariff (Anti-Dumping) Act* 1975. The *Customs Tariff Act* 1982 provides the statutory authority for imposing the actual rates of duty operative from time to time, while the *Customs Tariff (Anti-Dumping) Act* 1975 provides protection for Australian industry against various forms of unfair trading.

The Customs Tariff

The first *Australian Customs Tariff* was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The *Australian Customs Tariff* has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting concessional treatment to certain imports from countries, the subject of various Trade Agreements. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

The customs value of imported goods is established in accordance with the provisions of the *Customs Act* 1901. Valuation must follow precise rules and practices to ensure consistency and equity in the treatment of goods. Customs values are also the basis for import trade statistics.

On 30 November 1981, Australia adopted the international value system which is expressed in the Agreement on Implementation of Article VII of the General Agreement on Tariffs and Trade (GATT).

This GATT Agreement provides that the customs value shall be based, as far as is possible, on the actual price of the goods. The price may be subject to a limited range of adjustments for such matters as packing costs and other considerations, passing from the buyer to the seller. The price cannot be used as a basis for valuation if the buyer and seller are related and the price has been influenced by that relationship.

Where there is no price or the price cannot be used the Agreement provides other valuation methods.

Concessional rates. In addition to the concessional rates applicable to imports from all sources complying with particular ownership or other conditions as set out in Part I of Schedule 4, concessional rates apply to certain goods, the produce or manufacture of specified developing and declared preference countries and to goods the subject of the New Zealand/Australia Closer Economic Relations Agreement, the Canada/Australia Trade Agreement, the Papua New Guinea/Australia Trade and Commercial Relations Agreement and the South Pacific Regional Trade and Economic Cooperation Agreement.

Details of the rules regarding the determination of origin and the provisions applying to direct shipment are set out in sections 151 and 151A of the *Customs Act* 1901.

A full list of Forum Island, Declared Preference and Developing Countries is given in Schedule 1 to the *Australian Customs Tariff*.

General rates. General rates apply to goods from all countries which do not qualify for concessional rates of duty under a particular tariff classification.

Tariff concessions. The Tariff Concession System is the machinery whereby importers may obtain relief from protective rates of duty where goods serving similar functions to the imported goods are not produced in Australia or are not capable of being produced in Australia in the normal course of business; and where no substantially adverse effect would be caused to the market for any goods produced in Australia.

The System is administered by the Department of Industry and Commerce, Canberra and commenced operation on 1 July 1983. It replaces the old 'By-law' System which was found to be no longer appropriate following an Industries Assistance Commission (IAC) Inquiry conducted throughout 1981–82.

The System provides for the publication of applications for concession in special weekly editions of the *Commonwealth Gazette* (available for perusal at Customs Houses and major post offices). Anyone opposing an intended concession has 28 days to inform the Department of objections.

Concessions finally approved are published in schedule form called the 'Schedule of Commercial Tariff Concessions' and are available to any person importing the goods described therein.

Inquiries in respect of any aspect of the System should be directed either to the Tariff Concession Branch, Department of Industry and Commerce, Canberra or to the Tariff Concession Liaison Officer, Customs House in the capital cities. An explanatory booklet, which is regarded as the primary guide on the System both for industry and the administering Department, is also available from these locations.

Anti-Dumping and Countervailing Duties. The *Customs Tariff* (*Anti-Dumping*) *Act* 1975 provides protection for Australian industry against certain forms of unfair trading. Under this Act, Anti-Dumping duty may be imposed on goods that are sold to Australian importers at a price which is less than the 'normal value' of those goods. Countervailing duty may be imposed on goods on which a subsidy or bounty has been paid. Anti-Dumping or countervailing duties may however be imposed only where it can be demonstrated that there is a causal link between the dumped or subsidised imports, and injury suffered or threatened.

For details on calculation of Anti-Dumping or Countervailing duties, see the *Customs Tariff (Anti-Dumping) Act* 1975 and the publication: *Anti-Dumping and Countervailing Information* which are available from Customs Houses in capital cities or from the Department of Industry and Commerce, Canberra, ACT 2600.

Import restrictions

Import controls, by global tariff quotas or import licensing, are introduced to assist local industry following inquiry and report by the Industries Assistance Commission and the Temporary Assistance Authority. At present the textile, clothing and footwear industries are assisted by tariff quotas while the motor vehicle industry is assisted by import licensing. Import licensing firmly limits import quantities, provides for penal and seizure action and may be selectively applied to particular goods or countries. As such, it differs from global tariff quotas which allow imports up to a predetermined level, above which additional duties may be imposed. As part of the seven year quota control programme for textiles, clothing and footwear which commenced on 1 January 1982, a portion of quota is allocated by tender. Concessionary quotas are made available to imports from developing countries and allow for concessional entry of certain goods. The SPARTECA (South Pacific Trade and Economic Co-operation Agreement) quota also provides for concessional treatment of certain goods imported from Island Member Countries of the South Pacific Forum. Further information on import controls may be obtained from the Australian Customs Service, Department of Industry and Commerce, Edmund Barton Building, Barton, A.C.T.

Import prohibitions. Section 50 of the *Customs Act* 1901 provides that the Governor-General may, by regulation, prohibit the importation of goods into Australia and that this power may be exercised by:

(a) prohibiting the importation of goods absolutely;
(b) prohibiting the importation of goods from a specified place; or
(c) prohibiting the importation of goods unless specified conditions or restrictions are complied with.

Goods subject to these import controls are listed in the Customs (Prohibited Imports) Regulations and Customs (Endangered Species) Regulations.

Import prohibitions may also be imposed under the Quarantine Act; and sundry allied Commonwealth and State legislation.

Export controls

Export restrictions. Section 112 of the *Customs Act* 1901 provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (*a*) prohibiting the exportation of goods absolutely; (*b*) prohibiting the exportation of goods to a specified place; or (*c*) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations and Customs (Endangered Species) Regulations. Export prohibitions may also be imposed under the Export Control Act administered by the Department of Primary Industry; the Quarantine Act; and sundry allied Commonwealth and State legislation.

Exchange control—Banking Act 1959. As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III of the Banking (Foreign Exchange) Regulations to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities and currency.

Trade descriptions

The Commerce (Trade Descriptions) Act 1905. This Act, administered by the Australian Customs Service of the Department of Industry and Commerce, gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and in relation to specified export commodities.

Trade promotion and incentives

Each year the Commonwealth Government through the Department of Trade undertakes an extensive overseas trade promotion and publicity program.

Trade displays, fairs and exhibitions

For many years Australia has organised or participated in numerous major trade fairs, exhibitions and displays throughout the world.

Initially, the emphasis was on participation in general trade fairs directed at the public and the general commercial community. However, with the development of specialised export promotion techniques and the greater diversity of goods available for export, emphasis is now being placed on individual Australian trade displays and participation in specialised trade shows directed almost entirely at the business community. In addition, display rooms in Trade Commissioner offices are currently in use in Singapore, Kuala Lumpur, Seoul, Hong Kong, Jakarta, Port Moresby, Suva, Bangkok, Wellington and Auckland. Limited display space is also available in Tokyo.

Trade missions

At present the following types of trade missions are in use:

Survey missions. These are organised to obtain precise knowledge about the export trade potential for specific products in one or more overseas markets. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

Specialised and general trade missions. Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products, establishes agencies and negotiates sales.

Publications and advertising

The Department of Trade produces a range of English language and multi-lingual publications for distribution overseas through its Trade Commissioner posts. Special publications are produced for major Australian promotional activities overseas. The promotional activities are also supported by appropriate editorial publicity and advertising in foreign media publications.

Export education

The Commonwealth Government recently completed a three-year 'Export Now' Campaign. This has been replaced by an Export Education program involving seminars, workshops and training activities to help Australian exporters to penetrate overseas markets.

Export awards

The Department of Trade in conjunction with the Confederation of Australian Industry runs an annual program of Export Awards for Outstanding Export Achievement. In addition various other awards are also given from time to time.

Export incentives

The Commonwealth Government provides financial incentives to encourage exports. The Export Market Development Grants Act was introduced in 1974 and will operate until 30 June 1988. The scheme, administered by the Export Development Grants Board which is responsible to the Minister for Trade, is designed to encourage exporters and potential exporters to seek out and develop overseas markets. The scheme covers exporters of primary products, industrial goods, certain services including tourism, know-how and industrial property rights, whether the exporter is an individual, partnership, company or marketing organisation.

The scheme operates by way of taxable grants, to a maximum of $200,000 in respect to eligible expenditure incurred on overseas market research and development.

Overseas Trade Publicity Committee

The Overseas Trade Publicity Committee promotes products in an area where potential markets exist. Through the Committee, the Government contributes to members' promotional expenditure on the basis of 65 cents in the dollar. Members of the Committee are drawn from various marketing corporations and the Departments of Trade and Primary Industry.

Promotion of high technology products and services

The Department of Trade has undertaken the special promotion of exports of high technology products and services. Audio-visual displays and prestige publications as well as a catalogue of Australian technology have been produced for use by Trade Commissioners and in general promotion.

Government authorities

Export Finance and Insurance Corporation

The Export Finance and Insurance Corporation (EFIC) was established by the Commonwealth Government in 1975 to provide Australian exporters with a specialised range of insurance guarantee and finance facilities not normally available from commercial sources. The EFIC took over the functions of the Export Payments Insurance Corporation which had been operating since 1956.

Australian Overseas Projects Corporation

The Australian Overseas Projects Corporation was established in November 1978 as a statutory authority of the Commonwealth Government to encourage the export of Australian goods and services. Its prime objective is to assist Australian consultancy and construction organisations to compete for contracts for overseas development projects, particularly those which are beyond the resources of individual firms and require a turnkey or multi-disciplinary approach, or require a government-to-government involvement. The Corporation's major functions are, on request, to act as prime contractor, consortium member or agent on behalf of Australian organisations. The Corporation also serves as a central point for dissemination of information on overseas project opportunities.

Trade relations

Trade policy

Australia is very reliant on international trade for its economic well-being. A substantial proportion of Australia's agricultural and mineral production is exported. Australia is a major world exporter of a range of commodities including coal, iron ore, bauxite, alumina, manganese, mineral sands, wool, meat, wheat and sugar. Imports, particularly capital equipment, play a vital role in the country's economic development. Consequently, Australia is dependent on a stable international trade and payments system to secure its general trading objectives.

Australia's fundamental trade policy objectives include:

- the maintenance of an open international trade and payments system
- the maintenance of an equitable framework of rules based on the principles of multilateralism, non-discrimination, predictability and transparency, and which provides for progressive trade liberalisation
- in relation to agricultural trade, fair and predictable access to major markets, restraints on subsidised competition in third markets and stability in commodity markets
- the maintenance of secure and stable markets for minerals and assistance in obtaining stable and remunerative prices for mineral exports.

General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (GATT) is a multilateral treaty which provides the main framework of rules for the conduct of world trade. It also provides a forum in which countries can discuss and seek to overcome their trade problems as well as negotiate to enlarge world trading opportunities. The aim of the GATT is to liberalise world trade and place it on a secure basis, thereby contributing to economic growth and development.

The GATT entered into force in January 1948 with Australia being an original signatory. Since that date GATT membership has expanded to 89 countries, with a further 29 countries applying its rules on a de facto basis.

Seven rounds of multilateral negotiations to liberalise world trade have been held under the GATT, the most recent of which was the Tokyo Round (1973-1979). Concessions negotiated by member countries are incorporated in their 'Schedules of Concessions' which form an integral part of each country's obligations under the GATT. These concessions generally involve commitments not to increase tariffs on specific products above specified levels. The Tokyo Round negotiations also resulted in a number of agreements on non-tariff measures which clarified and expanded the existing rules of the GATT. These agreements included codes of conduct on subsidies and countervailing duties, government procurement, customs valuation, standards, import licensing, anti-dumping, trade in civil aircraft and a group of texts under the heading 'Framework for the Conduct of International Trade'. The latter includes texts which deal with reciprocity, more favourable treatment and fuller participation for developing countries, trade measures for balance of payments purposes, safeguard action for development purposes, consultation, dispute settlement and surveillance. There are also arrangements relating to bovine meat and dairy products.

All major developed countries have acceded to most of these agreements and Australia has already acceded or intends to accede to those on customs valuation, anti-dumping, import licensing, standards, subsidies, countervailing duties, the Framework texts and the arrangements on bovine meat and dairy products.

An important aspect of the GATT's work is to oversee the application of the trade rules established under its auspices. The main features of the General Agreement are:

- trade without discrimination; the guarantee of most-favoured-nation tariff treatment to all Contracting Parties
- agreement on commercial policy rules for international trade, including restrictions on the use of subsidies and quantitative restrictions
- provision of mechanism for consultations and dispute settlement
- safeguard, or emergency protection, provisions, enabling countries to apply temporary measures to industries seriously threatened by imports
- special recognition of the needs and capabilities of developing countries.

The highest body of GATT is the Session of Contracting Parties which usually meets annually. GATT decisions are generally arrived at by consensus, rather than vote, though two-thirds majority votes are required for the granting of 'waivers', (authorisations for members to depart from specific GATT obligations). Between Sessions of the contracting parties the Council of Representatives is authorised to act on both routine and urgent matters. The Council meets about six times a year.

In 1975 a Consultative Group of 18 comprising high level officials from key member countries was established to operate essentially as an executive steering group to assist GATT members carry out some of their major responsiblities more effectively.

The Committee on Trade and Development (CTD) reflects the GATT's increased focus on the problem of developing countries and has the duty of following all activities of GATT to ensure that problems of concern to developing countries are given priority attention. The CTD was formed after the introduction, in 1965, of Part IV of GATT which embodies commitments to individual and joint action by Contracting Parties, aimed at ensuring that the developing countries can increasingly find the means to raise living standards and promote rapid economic development through increased participation in international trade. This commitment has been elaborated by the Framework agreement enabling differential and more favourable treatment for developing countries, as a permanent legal feature of the world trading system.

A number of other committees have also been established to supervise implementation of the Tokyo Round agreements, examine the situation of countries using trade restrictions for balance of payments purposes, the agreement on textiles, anti-dumping practices and financial/administrative questions. Working parties are set up to deal with current questions, such as requests for accession, verification that agreements concluded by members are in conformity with GATT and to investigate disputes.

The developed country contracting parties to the GATT have introduced tariff preferences for developing country products under the Generalised System of Preferences (GSP).

The Australian System of Tariff Preferences for Developing Countries, in common with those of other donors, is a unilateral, non-reciprocal and non-contractual provision of specified preferential tariff advantages. Accordingly, Australia reserves the right at any time to modify, withdraw, suspend or limit the preferential treatment for any item or with respect to any beneficiary.

Australia's system of tariff preferences was introduced in 1966 (the first in the world) and has since been substantially revised and expanded through reviews in 1974, 1976 and 1979. On 1 January 1981 the system was further extended to include most textile, clothing and footwear products. Most dutiable manufactured and substantially processed primary products are now covered by the system. Margins of preference offered under the system are generally 10 to 15 per cent below the General Tariff rate.

The system is designed to assist developing countries to overcome their disadvantages in competing with other countries in the Australian market, providing always that such imports do not cause or threaten injury to Australian industry. A range of products where developing countries generally are already competitive on the Australian market are excluded from the system and preferences on a number of additional products have been withdrawn because of disruption to local industry. In some cases specific beneficiaries have been excluded from a preference.

Proposals for the addition or withdrawal of products from the system are referred to the Industries Assistance Commission for inquiry and report, usually within 45 days. This procedure gives all interested parties the opportunity to submit their views in evidence to a public inquiry.

Market advisory services

The Australian Government has established a Market Advisory and Preferences Section in the Department of Trade to advise and assist developing countries and countries with centrally planned economies in the marketing of their products in Australia. The Section, which is located in Canberra, is supported by two experienced Australian Trade Commissioners—one located in Sydney and the other in Melbourne—to maintain contact with the commercial sector and provide direct practical assistance.

To further assist developing countries the Government has established International Trade Development Centres in Sydney and Melbourne. The Centres house the local offices of the Market Advisory Service and provide a venue for small trade displays by developing countries as well as for other activities such as marketing seminars.

The Centres are operated by the Department of Trade and are funded under Australia's development assistance programme. From time to time short training courses on trade promotion topics are held at the Centres for officials from developing countries.

Bilateral arrangements

West Europe—Although the European Community (EC) has formal trading arrangements with a large number of countries providing either free trade or preferential treatment, no such arrangement has been concluded with Australia.

In recent years Australia has experienced a large and growing trade deficit with the EC which has reflected an imbalance of trading opportunities. In the context of the Multilateral Trade Negotiations, finalised in 1979, Australia was able to negotiate with the EC improved access into Community markets for a number of agricultural products. However the benefits Australia expected to receive from these arrangements have not been fully realised due to EC policies.

Consideration by the Community of proposals for reform of the Common Agricultural Policy (CAP) is expected to be completed in 1984. While welcoming suggestions for CAP reform, Australia has expressed concern to the EC about proposals to further reduce access into the Community for imports of some agricultural products as part of the adaptation of the CAP.

While the bilateral relationship has been overshadowed by the operations of the CAP and agricultural issues, there is significant potential for developing Australia's role as a supplier of minerals and energy to the EC and in attracting increased European investment to resource based development projects in Australia.

The Government has indicated that it wishes to pursue a new and more constructive approach in order to improve the relationship with the EC. Senior Australian officials met with the EC Commission in July 1983 with this objective and further consultations at Ministerial level are planned.

Trade agreements

Asia

People's Republic of China—signed 1973. The Agreement provides, inter alia, for reciprocal most favoured nation treatment for imports, while recognising the preferential arrangements extended by both countries. The Agreement includes schedules of goods which each country is interested in exporting to the other. It also provides that exchanges of goods and technical services under contracts and agreements will be at reasonable international market prices; that payments in relation to trade will be in freely convertible currency; and that each country will promote the inter-change of trade representatives, groups, and delegations, and encourage the commercial exchange of industrial and technical expertise. The Agreement also established a Joint Trade Committee to further the aims of the Agreement. A protocol on Economic Co-operation to the Trade Agreement was signed in September 1981. The Protocol has the objective of notifying to enterprises and organisations of the two countries that their Governments have agreed on a range of industry and industry sectors regarded as holding prospects for co-operation between the two countries, and the form in which co-operation projects may be implemented.

Japan—signed 1957. The current Agreement on Commerce between Australia and Japan was initially signed in 1957, amended in 1963 and formally ratified on 27 May 1964. It provides for reciprocal most favoured nation treatment of imports while recognising the preferential arrangements of both countries; for certain commitments by Japan in regard to some important Australian export commodities including wool, soft wheat, sugar, canned meat, leather, butter and cheese; and for equal opportunity for Japanese products in relation to Commonwealth Government purchases from suppliers overseas. It also provides for close consultation between the two countries on matters relating to trade.

Republic of Korea—signed 1975. The current Agreement replaced an earlier Agreement entered into by Australia and the Republic of Korea in 1965. The present Agreement states that the two governments are to take all appropriate measures to facilitate, strengthen, and diversify bilateral trade in accordance with the General Agreement on Tariffs and Trade; recognises the need to improve the conditions of world commodity trade; declares support in principle for international commodity agreements, and expresses support in principle for the conclusion of long-term commercial contracts between organisations and enterprises of the two countries. The Agreement also established a Joint Trade Committee to further the aims of the Agreement.

Philippines—signed 1975. The current Agreement replaces an earlier Agreement entered into in 1965. Provides, inter alia, for reciprocal most favoured nation treatment of imports from either country; recognises preferential agreements of both countries; encourages Australian investment and joint ventures in the Philippines. Provides for a Joint Commission to meet annually, or more frequently if required. The Agreement entered into force in May 1979.

Thailand—signed 1979. Provides, inter alia, for strengthening and diversification of bilateral trade; supports trading arrangements among ASEAN countries; supports international commodity agreements; encourages economic, commercial and industrial co-operation, including investment in Joint Ventures. Provides for a Joint Trade Committee to meet annually or as required.

Socialist Republic of Vietnam—signed in 1974. Provides, inter alia, for reciprocal most favoured nation treatment for imports and expresses support for the principle of long-term commercial contracts.

Indonesia—signed 1972. The current Agreement replaced an earlier Agreement signed in 1959. It provides, inter alia, for reciprocal most favoured nation treatment of imports; expresses support for trade initiatives and arrangements among member countries of the Association of South East Asian Nations (ASEAN); declares support in principle for international commodity agreements and encouragement for Australian commercial investment in Indonesia and provides for consultations as required on trade matters.

Malaysia—signed 1958. The Agreement provides for each country to accord preferences to the other on certain specified goods. The exchange of these preferences was placed on a more flexible basis by an Exchange of Letters on 21 February 1975. The Agreement further provides for protection of Malaysia's tin and rubber exports to Australia and of Australia's wheat exports to Malaysia against dumped or subsidised competition. The agreement also assures Malaysia that Australian tariff or import licensing treatment of natural rubber will be the same as for synthetic rubber.

Pacific

New Zealand—The New Zealand-Australia Free Trade Agreement (NAFTA) signed in 1965 came into force on 1 January 1966 and formally established a free trade area between Australia and

New Zealand. However, complete free trade was not thereby achieved. The Agreement provides only for free trade in certain scheduled goods. Provision is made for additions to the free trade schedule. It also provides in respect of non-scheduled goods, for the two governments to agree on special measures (including the remission or reduction of duties) beneficial to the trade and development of each country.

The 1933 Agreement continues in effect as part of the Free Trade Agreement except as superseded or modified by it. Following the termination in early 1973 of the trade agreements which they had with Britain, Australia and New Zealand entered into an interim arrangement on tariffs and tariff preferences on 7 May 1973. This has been replaced by the Agreement on Tariffs and Tariff Preferences which came into effect on 1 December 1977 and allows for the continuation of the contractual right of both countries to margins of preferences in each others' markets.

In March 1980 the Prime Ministers of Australia and New Zealand agreed upon a framework for further detailed exploration and examination of possible arrangements for a closer economic relationship with the central objective of the gradual and progressive liberalisation of trade between the two countries on all goods.

Papua New Guinea—The Papua New Guinea-Australia Trade and Commercial Relations Agreement (PATCRA) which came into force in 1977 provides, inter alia, that subject to certain exceptions, trade between Australia and Papua New Guinea shall be free of duties and other restrictions.

Pacific Islands—The South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) which came into force in January 1980 provides, inter alia, that Australia will progressively provide duty free and unrestricted access for as wide a range of Forum Island country products as possible.

Americas

Canada—signed 1960. The Canada/Australia Trade Agreement (CANATA) was updated by an Exchange of Letters in 1973 to incorporate preferences derived from Australia's Trade Agreement with the United Kingdom and to provide greater flexibility in the administration of preferential tariff arrangements.

Brazil—signed 1978. The Agreement represented a significant development in strengthening trade and economic links between Australia and Brazil. It basically confirms GATT rights and obligations and emphasises industrial co-operation including investment. A significant feature is the ten year initial life of the Agreement to cover long term commodity contracts. It also establishes a Joint Consultative Committee.

Europe

East Europe—The development of Australia's trade relations with the countries of East Europe began as part of a policy of market diversification away from West Europe in the mid 1960s.

Formal trade agreements Australia has signed with the German Democratic Republic, Hungary, Bulgaria (all in 1974), Romania (in 1975) and Poland (in 1978—supplementary to the earlier 1966 Agreement) are broadly similar in their provisions. They either confirm reciprocal most favoured nation treatment of imports while recognising preferential arrangements or, as in the Trade Agreements with Hungary, Poland, and Romania, acknowledge that trade between Australia and these countries is to be in accordance with the rights and obligations of both countries under the General Agreement on Tariff and Trade. They provide for the encouragement and facilitation of the further development of mutually beneficial trade and economic relations and express support in principle for the conclusion of relevant international commodity agreements aimed at improving the conditions of international trade in primary products.

There are provisions to encourage and facilitate the development of economic co-operation and the negotiation of long-term commercial contracts between respective enterprises and organisations and the interchange of commercial trade and technical representations, groups and delegations. Mixed Commissions are also established by these Agreements to provide a forum for regular bilateral discussions on trade development and trade related issues and problems.

In addition, the Agreements with the German Democratic Republic and Bulgaria provide for the exchange of indicative lists of goods each country is interested in exporting to the other.

The Agreement with the U.S.S.R. (signed 1965) provides for reciprocal most favoured nation treatment of imports and recognises the preferential agreements of both countries. A supplementary Agreement on the Development of Trade and Economic Relations was signed in 1973 and provides, inter alia, for encouragement and facilitation of trade between the two countries; encouragement of industrial and technical co-operation; support for international commodity agreements; and established a Mixed Commission to provide a forum for regular consultations on measures to develop bilateral trade and on bilateral trade problems, and to further the aims of the Agreement.

Other bilateral Trade Agreements are in force with Yugoslavia (signed 1970) and Czechoslovakia (signed 1972). A protocol (to the Trade Agreement with the German Democratic Republic) on Industrial and Technical Co-operation was signed in Berlin in 1977.

Middle East

Bahrain—The Agreement on Trade, Economic and Technical Co-operation was signed in May 1979. The Agreement expresses the intention of the two Governments to develop and expand trade and economic relations by the establishment of a Joint Committee, the facilitation of joint ventures in the two countries, and encouraging the exchange of technology and technical expertise between commercial enterprises.

Iraq—The Agreement on Trade, Economic and Technical Co-operation was signed in March 1980. The Agreement provides, inter alia, for the exchange of most favoured nation treatment between Australia and Iraq, encouragement of the negotiation of commercial contracts between relevant organisations and commercial enterprises and the establishment of a Joint Governmental Commission.

Saudi Arabia—The Agreement on Economic and Technical Co-operation was signed in March 1980 and provides for the facilitation of joint ventures in each country, encouraging the exchange of scientific and technological research, and the establishment of a Joint Commission.

Oman—signed 1981. The Agreement on Trade, Economic and Technical Co-operation expresses the intention of the two governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise. The Agreement also established a Joint Commission.

Kuwait—signed 1982. The Agreement on Economic and Technical Co-operation expresses the intention of the two Governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise and establishes a Joint Committee.

Others

India—signed 1976. The Agreement confirms that trade between the two countries shall be conducted in accordance with the provisions of GATT. It provides for encouragement and co-operation between India and Australia and establishes a Joint Trade Committee to meet annually and review the operation of the Agreement and advance its objectives.

Trade services

Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the 1939-45 War is available in Year Book No. 51, page 496. Since the War the Service has increased steadily; by late 1983 there was an establishment of 166 Trade Commissioners and Assistant Trade Commissioners in Australia and at 53 posts in 43 countries.

Trade Commissioners are responsible for providing commercial intelligence in their territories in the fields of manufactured goods, rural commodities, resources, energy and technical and allied services. Particular facilities provided for Australian exporters and export organisations include: surveying market prospects; advising on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advising and assisting business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods and services and helping to attract desirable investment.

In some countries Trade Commissioners also participate in inter-governmental negotiations in the resources and commercial fields. In certain countries where there is no diplomatic or consular mission, Trade Commissioners are called upon to act as the Australian government representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from both private enterprise and the public service. Applications for entry are invited periodically by public advertisement.

The Trade Commissioner Service is administered by the Department of Trade (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to that mission and to hold an appropriate diplomatic or consular rank—Minister (Commercial), Counsellor (Commercial) or First or Second Secretary (Commercial).

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities only. Algeria; Argentina; Austria; Bahrain; Belgium; Brazil (Rio de Janeiro); Britain; Canada (Vancouver, Toronto, Ottawa); China, People's Republic; Egypt, Arab Republic of; Fiji; France; Germany, Federal Republic of; Greece; Hong Kong; India; Indonesia; Iran; Iraq; Israel; Italy (Rome, Milan); Japan (Tokyo, Osaka); Kenya; Korea, Republic of; Kuwait; Malaysia; Mexico; Netherlands; New Zealand (Wellington, Auckland); Papua New Guinea; Philippines; Saudi Arabia (Jeddah, Riyadh); Singapore; South Africa (Johannesburg); Spain; Sweden; Switzerland (Geneva); Thailand; United Arab Emirates; United States of America (Washington DC, Chicago, Houston, Los Angeles, New York, San Francisco); U.S.S.R.; Venezuela; Yugoslavia, Socialist Federal Republic of.

Full details of the Australian Trade Commissioner posts are available from the Department of Trade, Canberra, A.C.T. 2600.

Australian Trade Correspondents and Marketing Officers

Detached Australian Trade Correspondents and Marketing Officers supplement the work of the Trade Commissioner in whose territory they are located. Correspondents are situated in various locations throughout the world.

Trade representation in Australia

Details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T. 2600.

Collection and presentation of statistics

Source of data

Foreign trade statistics are compiled by the Australian Bureau of Statistics from documentation submitted by exporters and importers or their agents to the Australian Customs Service as required by the Customs Act.

Scope of the statistics

The statistics presented below are, with one exception, recorded on a *general trade* basis, i.e., total exports include both Australian produce and re-exports, and total imports comprise goods entered directly for domestic consumption together with goods imported into Customs warehouses. The statistics of import clearances, however, are recorded on a *special trade* basis, i.e., clearances comprise goods entered directly for domestic consumption together with goods cleared into the domestic market from Customs warehouses.

Exports of Australian produce are goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

Re-exports are goods, materials or articles originally imported which are exported either in the same condition in which they were imported or after undergoing repair or minor operations which leave them essentially unchanged. Minor operations include blending, packaging, bottling, cleaning, sorting, husking or shelling.

Total exports are the aggregate of exports of Australian produce and re-exports.

The following are excluded from recorded trade statistics:

(a) direct transit trade, i.e., goods being trans-shipped or moved through Australia for purposes of transport only;

(b) migrants' and passengers' effects exported or imported; and parcels post exports and imports of small value, for which Customs entries are not required;

(c) certain materials under inter-governmental agreements for defence and similar projects for which Customs entries are not required;

(d) vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries;

(e) the sale or purchase of any vessel and/or aircraft intended for use on overseas routes;

(f) fish and other sea products landed in Australia or abroad directly from the high seas by Australian vessels;

(g) entries lodged on informal clearance documents (ICD) for values not exceeding $250;

(h) export consignments where the value of the goods in each transaction is less than $250.

and for imports only:

(i) bunkers and stores supplied to vessels and aircraft prior to arrival in Australia.

Exports ships' and aircraft stores. Prior to July 1982 bunkers and stores supplied to foreign owned vessels and aircraft prior to departure overseas were excluded from export statistics but were published separately as ships' and aircraft stores statistics. The United Nations Statistical Commission has recommended (International Trade Statistics, *Concepts and Definitions*, United Nations Statistical Papers, Series M, No 52, Revision 1, 1982) that such bunkers and stores be included in total exports statistics. Accordingly, commencing with July 1982 statistics, these commodities have been classified according to the appropriate AECC items. As a result, from July 1982 total export statistics and commodity statistics which include stores for foreign ships and aircraft are not strictly comparable with data for earlier periods.

Statistical period

Exports. Exports are recorded statistically in the month in which the entries are both finalised by the Australian Customs Service and passed to the ABS for further processing. Regular exporters or their agents may provide details of their export shipments on a periodic rather than an individual shipment basis by submitting weekly or monthly returns. These 'periodic returns' must be submitted to the Australian Customs Service within seven days of the end of the period in question covering all shipments during that period. All other exporters are required to report each individual shipment prior to the ship's departure. Approximately 90 per cent of monthly export values are recorded on periodic returns. The statistical month for Customs outports (generally ports other than those at which the main Customs Office in each State is located) closes on the twenty-first of each month, whereas for mainports the statistical month is the calendar month. Because of these factors export statistics for a particular month do not necessarily represent all of the commodities actually exported during that month. Analysis of past data has shown that in aggregate approximately 40 per cent of export trade by value for a particular month reflects actual shipments during that month, 55 per cent by value was actually exported during the previous month with the remaining 5 per cent by value exported in earlier months. For individual commodities the percentage by value representing actual exports in a month may vary considerably.

Imports. Imports are recorded statistically in the calendar month in which the import entries were both finalised by the Australian Customs Service and passed to the ABS for further processing. Import entries may be lodged early using the check-to-arrive system or the documents may be delayed because of various validation checks carried out by Customs prior to the entries being passed to the ABS. Import statistics for a particular month do not necessarily represent entries lodged or commodities actually imported during the month in question. Analysis of past data has shown that in aggregate approximately 70 per cent of import trade by value recorded for a particular month was actually imported during that month, 25 per cent was actually imported during the previous month with the remaining 5 per cent being imported in earlier months. For individual commodities the percentage by value representing actual imports in a month may vary considerably.

State

From 1 July 1978, *State* statistics for exports comprise State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Previously *State* was the State in which the export document was lodged with the Australian Customs Service. Because of this change, figures from 1 July 1978 are not directly comparable with those for previous periods.

For imports the State is that in which the import entry was lodged with the Australian Customs Service. The port of lodgement of the import entry is not necessarily the port of discharge of the goods or of final consumption. Goods forwarded interstate after import, whether in containers or not, are recorded as being imported at the port of lodgement of the import entry.

Valuation

Exports. Goods actually sold to overseas buyers prior to shipment are valued at the free-on-board (f.o.b.) Australian port of shipment equivalent of the actual price at which the goods were sold. Goods shipped on consignment are valued at the f.o.b. Australian port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods are dispatched for sale. The recorded value of exports includes the value of the outside package, other than international containers used for containerised cargo.

Imports. The recorded value of imports is the customs value (formerly referred to as the value for duty). On 30 November 1981, Australia changed its system of valuation from the Brussels Definition of Value (BDV) to the GATT Agreement on Customs Valuation. The Agreement reflects one of a number of trade related codes of conduct established during the round of Multi-lateral Trade Negotiations (MTN) concluded in 1979. The GATT Agreement differs from the Brussels Definition of Value in that it offers a set of practical rules on the valuation of imports rather than a list of conceptual guidelines. Under the Agreement the primary basis for establishing the customs value is the price actually paid or payable, provided a number of conditions are met. The most important condition is that the buyer and seller must be independent of each other. If the conditions are not met the practical rules are used to determine the customs value. The recording of the value of imports remains on a free-on-board (f.o.b.) basis (i.e. the charges and expenses involved in delivering the goods from the place of exportation to Australia are excluded). The recorded value also continues to include the value of outside packages, other than international containers used for containerised cargo. The change in the basis of valuation is expected to have a negligible effect on value and duty import statistics. For details of the method of valuation used prior to 30 November 1981, *see* Year Book No. 66, page 633.

Merchandise exports and imports

In accordance with standards recommended by the United Nations: Merchandise exports are defined as all goods which subtract from the stock of material resources in Australia as a result of their movement out of the country. Merchandise exports, therefore, exclude goods exported with the reasonable expectation of re-import within a limited time. A complete list of commodities not included in merchandise trade is shown under section 9 (b) of the *Australian Export Commodity Classification* (AECC). These include, for example, coin being legal tender and goods for temporary exhibition outside Australia;

Merchandise imports are defined as all goods which add to the stock of material resources in Australia as a result of their movement into the country. Merchandise imports, therefore, exclude goods imported with the reasonable expectation of re-export within a limited time. A complete list of commodities not included in merchandise trade is shown under Section 9 (b) of the *Australian Import Commodity Classification* (AICC). These include, for example, coin being legal tender and goods for temporary exhibition in Australia.

Goods excluded from merchandise trade are for convenience termed non-merchandise and such trade is shown separately in some tables. Total trade is the sum of merchandise and non-merchandise.

Commodity classification

Exports and imports are classified according to the items of the AECC and AICC respectively, which, from 1 July 1978, have been based on the *Standard International Trade Classification*, Revision 2 (United Nations, Statistical Papers, Series M, No. 34, Revision 2, 1975). Copies of, or extracts from these classifications may be obtained from offices of the ABS in Canberra and in each capital city.

Australian Standard Commodity Classification

The Australian Standard Commodity Classification (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australia Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in the manufacturing industries. The second edition, which relates to the year 1977 – 1978 was published in 1980 and has been amended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

Country

A country is defined as a geographical entity which trades, or has the potential to trade, with Australia in accordance with Australian Customs provisions. External territories under Australian administration *are* treated separately whilst self-governing territories and dependent territories under the administration of other countries *may* be treated as individual countries in Australian foreign trade statistics. *Exports:* for exports, *country* refers to the country to which the goods were consigned at the time of export. Where the country of consignment is not determined at the time of export, goods are recorded as exported *For orders* and in those cases where it was found to be impossible to determine the destination, as *Destination unknown. Imports:* for imports, *country* refers to the country of origin of the goods which is defined as the country of production for Customs purposes.

Quantity data

Where quantities are shown they are generally expressed in terms of the normal unit of quantity used in the appropriate industry and as specified in the *Australian Export and Import Commodity Classifications* (1203.0, 1204.0) published by the ABS. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (e.g. a statistical item which covers a number of commodities that cannot be recorded under a single unit of quantity).

Excess of exports or imports

The excess of the value of exports or imports does not represent the balance of trade. The balance of trade is the excess of exports or imports on a *balance of payments* basis. Details of the adjustments (relating to coverage, timing and valuation) made to total recorded exports and imports for balance of payments purposes, are set out in the annual publication *Balance of Payments, Australia* (5303.0). Some information may be found in the section relating to the balance of payments, page 627.

Foreign trade statistics

Total foreign trade

The following table shows the total trade of Australia with overseas countries from 1977–78 to 1982–83.

FOREIGN TRADE
($m)

Year	*Exports*	*Imports*	*Excess of exports (+) or imports (-)*
1977–78	12,270	11,169	+1,101
1978–79	14,241	13,752	+ 489
1979–80	18,871	16,218	+2,653
1980–81	19,177	18,965	+ 212
1981–82	19,581	23,013	–3,432
1982–83(p)	22,205	21,810	+395

Plate 48 below shows the foreign trade of Australia from 1962–63 to 1982–83.

FOREIGN TRADE 1962-63 TO 1982-83

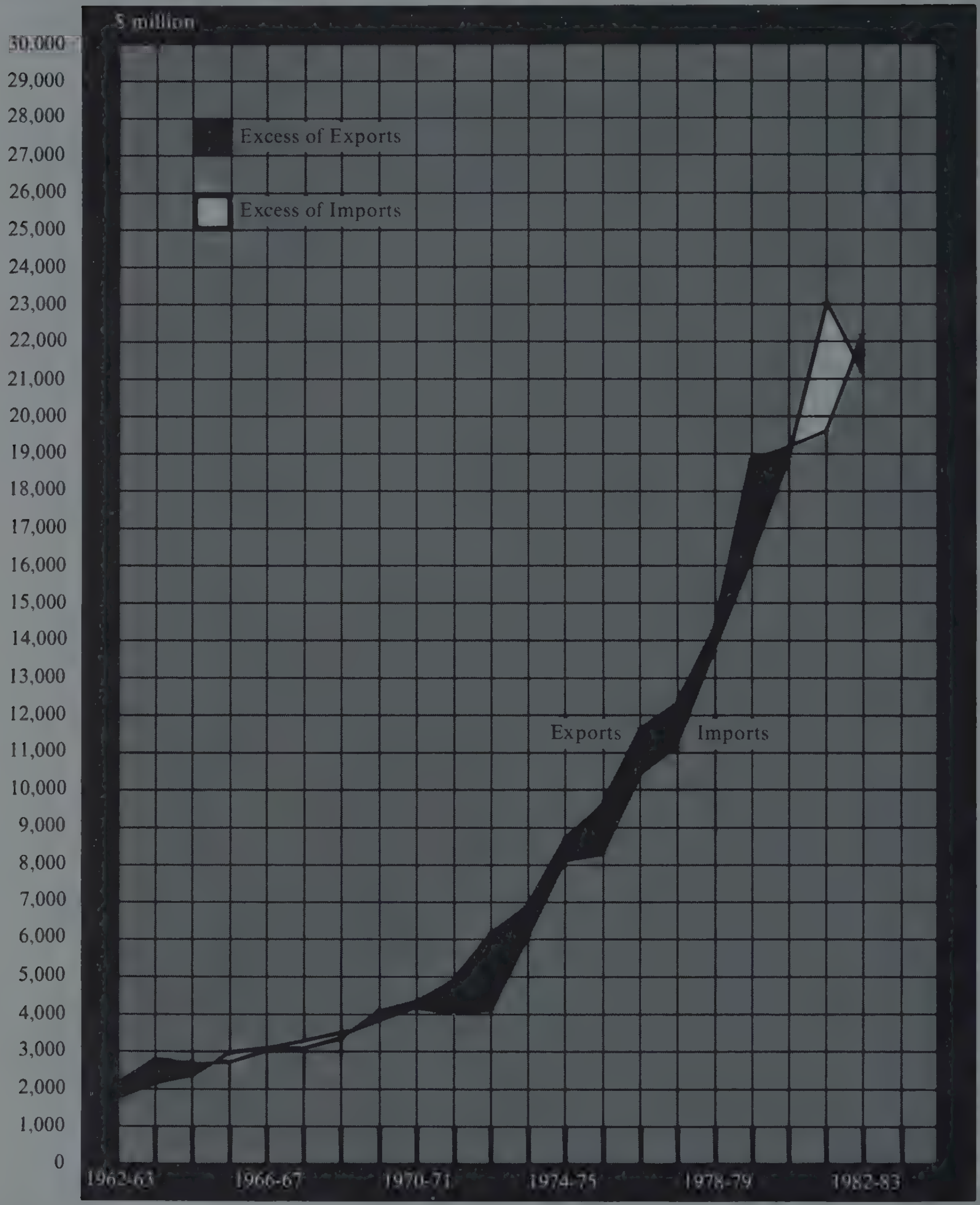


PLATE 48

The following table shows particulars of merchandise and non-merchandise trade for recent years.

MERCHANDISE AND NON-MERCHANDISE TRADE

($m)

EXPORTS

Year	*Merchandise*	*Non-merchandise*	*Total*
1977–78	12,049.6	220.1	12,269.7
1978–79	14,071.2	169.7	14,240.9
1979–80	18,605.8	265.1	18,870.9
1980–81	18,949.4	227.5	19,177.0
1981–82	19,293.8	281.4	19,575.2
1982–83(p)	21,538.7	666.6	22,205.2

IMPORTS

Year	*Merchandise*	*Non-merchandise*	*Total*
1977–78	11,082.3	86.6	11,168.9
1978–79	13,650.9	100.6	13,751.5
1979–80	16,044.8	172.7	16,217.5
1980–81	18,790.3	174.3	18,964.6
1981–82	22,769.1	235.8	23.004.9
1982–83(p)	21,266.6	543.7	21,810.3

VALUE OF EXPORTS AND IMPORTS, AUSTRALIA, PROPORTIONS BY COUNTRY 1978-79 TO 1982-83

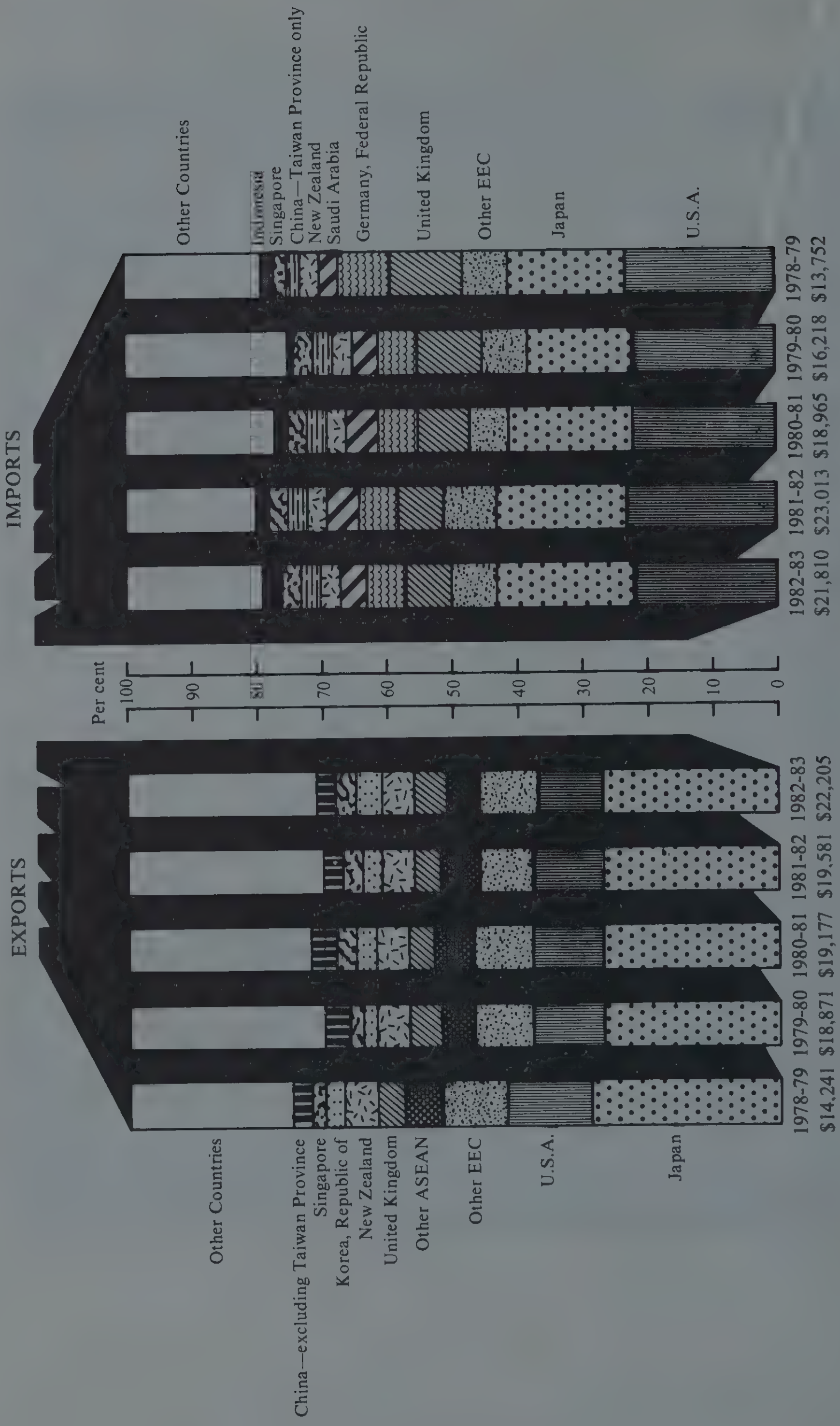


PLATE 49

Classified summary of Australian foreign trade

The following table shows exports and imports according to divisions of the Australian Export and Import Commodity Classifications (based on the *Standard International Trade Classification* Revision 2).

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS

($'000)

Division No.	Description	Exports 1980–81	Exports 1981–82	Exports 1982–83(p)	Imports 1980–81	Imports 1981–82	Imports 1982–83(p)
00	Live animals chiefly for food	220,656	227,626	235,993	23,427	33,308	27,509
01	Meat and meat preparations	1,594,151	1,380,856	1,677,608	9,838	10,140	14,741
02	Dairy products and birds' eggs	270,659	301,059	328,919	39,248	45,626	58,690
03	Fish and fish preparations	231,912	308,523	356,499	190,319	213,205	216,395
04	Cereals and cereal preparations	2,326,180	2,495,776	1,830,842	19,591	31,168	38,269
05	Fruit and vegetables	235,718	205,697	239,701	116,217	147,537	170,082
06	Sugar, preparations, honey	1,168,931	793,725	581,095	11,070	14,169	14,710
07	Coffee, tea, cocoa and spices	29,303	31,387	36,274	194,317	187,114	218,616
08	Feeding stuff for animals	37,697	44,426	63,973	27,101	21,646	39,001
09	Miscellaneous food preparations	14,415	13,739	17,517	23,691	28,239	37,977
11	Beverages	35,625	39,378	52,209	91,288	103,545	100,514
12	Tobacco and tobacco manufactures	11,452	10,632	14,487	77,818	69,455	83,336
21	Hides, skins and furskins, raw	210,335	217,494	232,755	2,504	2,979	2,452
22	Oil seeds, oil nuts and oil kernels	7,763	14,870	10,320	16,905	13,558	15,316
23	Crude rubber (including synthetic and reclaimed)	1,652	2,136	2,471	70,330	56,773	47,201
24	Wood, timber and cork	208,152	184,875	183,222	189,465	206,916	164,087
25	Pulp and waste paper	2,129	1,437	3,151	108,549	97,520	80,991
26	Textile fibres and their waste	1,873,501	1,888,544	1,927,209	84,917	90,427	76,410
27	Crude fertilisers and minerals (except coal, petroleum and precious stones)	89,330	84,463	98,929	213,327	222,775	196,212
28	Metaliferous ores and metal scrap	3,306,273	(*a*)3,375,812	(*b*)3,753,540	37,020	33,803	16,279
29	Crude animal and vegetable materials n.e.s.	62,254	52,730	55,875	40,710	44,733	47,914
32	Coal, coke and briquettes	1,981,203	2,295,593	3,080,276	6,211	2,011	5,275
33	Petroleum and petroleum products	516,573	557,458	1,303,888	2,719,006	3,007,898	3,085,308
34	Petroleum gases and other gaseous hydrocarbons	(*c*)	316,715	343,174	262	653	678
41	Animal oils and fats	80,443	82,027	78,543	714	799	727
42	Fixed vegetable oils and fats	4,250	7,550	1,679	43,760	53,483	49,647
43	Animal and vegetable oils, fats and waxes, processed	7,117	5,774	6,848	18,947	25,689	31,029
50	Combined confidential items from 513 and 582	(*d*)	–	–	5,771	–	–
51	Chemical elements and compounds	49,902	44,275	45,182	437,330	(*e*)495,462	(*e*)466,749
52	Mineral tar and crude chemicals from coal, petroleum and natural gas	55,794	(*f*)43,692	(*f*)39,071	204,825	260,462	232,391
53	Dyeing, tanning and colouring materials	17,274	(*g*)18,852	(*g*)20,303	77,058	88,593	77,972
54	Medicinal and pharmaceutical products	81,728	88,454	115,714	141,044	155,381	193,427
55	Essential oils and perfume materials; toilet and cleansing preparations	31,608	30,807	33,822	86,090	102,022	106,074
56	Fertilisers, manufactured	5,228	4,521	4,324	49,003	60,586	89,557
57	Explosives and pyrotechnic products	6,212	7,837	8,142	9,202	13,038	9,299
58	Plastic materials, regenerated cellulose and artificial resins	72,133	90,466	112,879	357,187	(*h*)430,487	(*i*)362,933
59	Chemical materials, n.e.s.	76,584	73,372	85,726	220,616	221,853	234,518
60	Combined confidential items from 661, 694 and 695	(*d*)	–	–	5,425	–	
61	Leather, leather manufactures, n.e.s. and dressed furskins	31,508	34,168	47,665	38,291	43,770	45,543
62	Rubber manufactures, n.e.s.	12,085	10,956	10,965	241,700	287,232	245,057
63	Wood and cork manufactures (excluding furniture)	8,528	6,835	7,907	92,658	106,206	93,721
64	Paper, paperboard and manufactures	56,433	51,067	46,760	458,137	556,824	484,111
65	Textile yarn, fabrics, made-up articles	123,054	138,885	155,660	980,887	1,095,203	(*j*)1,011,237
66	Non-metallic mineral manufactures n.e.s.	121,296	114,468	110,138	396,065	(*k*)410,067	(*l*)368,613
67	Iron and steel	533,459	439,202	487,525	458,231	577,541	549,669
68	Non-ferrous metals	984,129	994,490	1,251,763	109,535	136,768	93,871
69	Manufactures of metal, n.e.s.	166,332	193,888	178,109	487,915	(*m*)642,204	(*n*)553,126
71	Machinery, other than electric	40,656	98,377	127,712	558,380	747,268	675,136
72	Electrical machinery and apparatus	195,490	170,129	179,481	1,216,150	(*o*)1,481,317	(*o*)1,076,724
73	Transport equipment	26,993	23,497	28,814	219,431	227,322	174,261
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	154,425	154,882	157,439	988,012	(*q*)1,213,322	(*s*)1,155,950
75	Office machines and automatic data processing equipment	50,705	70,881	88,613	641,016	733,389	819,132
76	Telecommunications and sound recording and reproducing apparatus and equipment	35,735	39,845	71,837	553,123	710,763	807,467

For footnotes *see* end of table

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS—*continued*

($'000)

Division No.	Description	Exports			Imports		
		1980–81	*1981–82*	*1982–83(p)*	*1980–81*	*1981–82*	*1982–83(p)*
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	98,948	111,124	116,737	819,447	(*t*)996,051	(*t*)973,185
78	Road vehicles (including air cushion vehicles)	183,776	196,415	230,661	1,703,592	1,969,020	1,806,037
79	Other transport equipment	290,865	234,276	132,611	334,156	1,277,704	533,465
81	Sanitary, plumbing, heating and lighting fixtures and fittings	5,184	5,260	7,064	37,857	41,972	40,760
82	Furniture	9,632	13,340	13,158	92,991	129,009	112,368
83	Travel goods, handbags, etc.	658	834	1,840	62,727	78,684	88,975
84	Clothing and accessories; articles of knitted or crocheted fabric	17,599	13,234	16,766	306,223	392,326	389,237
85	Footwear	4,544	3,742	4,159	115,362	143,604	144,630
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	84,549	110,251	133,699	374,687	437,836	437,324
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	95,063	103,469	131,735	347,024	(*u*)390,840	(*u*)373,885
89	Miscellaneous manufactured articles	125,789	151,190	167,288	926,722	1,066,506	1,144,125
9A	Commodities and transactions not classified according to kind	(*v*)567,839	(*w*)472,776	(*x*)650,402	258,064	(*y*)291,385	(*z*)456,704
	Total merchandise(aa)	*18,949,410*	*19,300,061*	*21,538,670*	*18,788,489*	*22,777,184*	*21,266,599*
9B	Non-merchandise(*ab*)	227,544	281,418	666,576	176,115	235,806	543,740
	Total	**19,176,955**	**19,581,480**	**22,205,246**	**18,964,604**	**23,012,990**	**21,810,338**

(*a*) Excludes AECC items 287.31.00, 287.70.01, 287.93.07 and 287. 99.09. (*b*) Excludes AECC items 287.31.00, 287.70.00, 287.93.07 and 287.99.19. (*c*) Included in Division 9A. (*d*) Imports only. (*e*) Excludes AICC items 513.79.13 and 513.90.15. (*f*) Excludes AECC item 522.49.00. (*g*) Excludes AECC item 533.10.00. (*h*) Excludes AICC items 582.70.04 and 582.70.06. (*i*) Excludes AICC item 582.70.04. (*j*) Excludes AICC item 651.95.06 from 1.11.82. (*k*) Excludes AICC item 661.20.01. (*l*) Excludes AICC item 661.20.01 until 28.2.83. (*m*) Excludes AICC items 694.01.02 and 695.39.60.. (*n*) Excludes AICC item 691.10.05 from 1.5.83; 694.01.02 and 695.39.60. (*o*) Excludes AICC item 723.30.01. (*q*) Excludes AICC items 749.10.46 and 749.10.56. (*s*) Excludes AICC items 749.10.70 and 749.10.76. (*t*) Excludes AICC item 775.86.01. (*u*) Excludes AICC item 881.11.45. (*v*) Includes AECC Division 34. (*w*) Includes AECC items 287.31.00, 287.70.01, 287.93.07, 287.99.09, 522.49.00 and 533.10.00. (*x*) Includes AECC items 287.31.00, 287.70.00, 287.93.07, 287.99.19, 522.49.00 and 533.10.00. (*y*) Includes AICC items 513.79.13, 513.90.15, 582.70.04, 582.70.06, 661.20.01, 694.01.02, 695.39.60, 723.30.01, 749.10.46, 749.10.56, 775.86.01 and 881.11.45. (*z*) Includes AICC items 513.79.13, 513.90.15, 582.70.04, 651.95.06 from 1.11.82, 661.20.01 until 28.2.83, 691.10.05 from 1.5.83, 694.01.02, 695.39.60, 723.30.01, 749.10.70, 749.10.76, 775.86.01 and 881.11.45. (*aa*) The sum of Divisions 00 to 9A. (*ab*) A complete description of non-merchandise items is contained in the *Australian Export Commodity Classification* (1203.0) and the *Australian Import Commodity Classification* (1204.0).

EXPORTS OF MAJOR COMMODITIES

Commodity	Unit of quantity	*Quantity*			*Value ($'000)*		
		1980–81	*1981–82*	*1982–83(p)*	*1980–81*	*1981–82*	*1982–83(p)*
Aluminium and alloys, unworked .	tonnes	41,984	144,316	194,652	55,619	165,829	222,368
Aluminium oxide and hydroxide .	"	6,371,263	6,170,209	5,729,426	988,192	1,092,110	1,072,939
Barley	"	1,598,422	1,576,876	859,259	242,716	241,345	135,488
Butter	"	14,988	6,728	15,565	29,961	19,185	41,140
Cars, passenger motor, assembled and unassembled		. .	. .	. .	67,000	69,039	79,885
Cheese	tonnes	54,091	57,505	54,435	103,749	122,866	133,507
Coal (anthracite, bituminous and sub-bituminous) (except briquettes)	"	47,248,424	46,121,434	54,596,774	1,967,707	2,289,632	3,070,483
Copper, ore and concentrates . .	"	146,149	136,652	225,271	75,930	54,926	83,565
Copper, refined, unworked . . .	"	60,368	42,063	72,091	98,736	60,233	116,311
Crustaceans and molluscs (except canned or bottled)		. .	. .	. .	200,581	269,424	307,888
Flour (wheaten) plain white . .	tonnes	61,301	54,917	54,672	15,452	13,969	14,437
Fruit, fresh and nuts, fresh or dried	"	169,374	148,831	162,169	135,308	108,124	129,872
Fruit, preserved and fruit preparations		. .	. .	. .	73,685	67,003	70,822
Hides, bovine and equine (except calf and kip skins)	tonnes	113,250	125,301	133,603	89,337	108,946	133,540
Iron and steel ingots and other primary forms	"	554,546	602,060	696,907	120,926	117,950	121,909
Iron ore and concentrates (except roasted iron pyrites)	"	74,952,689	74,501,861	66,760,797	1,116,965	1,252,155	1,493,395
Iron, pig and cast	"	349,542	47,910	314,716	41,905	5,088	23,569
Lead and lead alloys (including silver-lead) unworked	"	287,216	326,975	340,904	321,067	263,566	301,524
Meat, fresh, chilled or frozen, beef—boneless	"	496,619	488,746	532,122	1,070,202	944,914	1,153,256
Meat, fresh, chilled or frozen—bovine animals, other	"	18,065	53,862	74,963	39,091	88,295	135,729
Meat, fresh, chilled or frozen—edible offals	"	51,636	45,519	47,977	64,316	51,382	60,094
Meat, fresh, chilled or frozen—sheep, lambs and goats	"	247,084	147,006	172,669	322,962	207,522	235,960
Milk and cream	"	89,643	101,461	99,492	119,110	144,370	140,433
Nickel and nickel alloys, unworked		n.p.	n.p.	n.p.	115,882	116,818	148,131
Nickel matte and speiss		n.p.	n.p.	n.p.	304,006	258,270	227,246
Petroleum products		. .	. .	. .	516,573	557,458	1,303,861
Rice	tonnes	281,387	596,515	404,883	99,923	195,423	120,257
Skins, sheep and lamb, with wool on	"	71,371	66,427	60,874	89,909	76,641	69,662
Sorghum, unmilled	"	462,680	1,270,964	444,977	57,485	152,843	53,867
Sugar—from cane (except icing sugar)	"	2,557,537	2,497,363	2,547,718	1,145,878	764,325	557,423
Titanium and zirconium ore and concentrates (except beneficiated ilmenite)	"	1,635,712	1,540,497	1,333,182	125,091	126,778	117,024
Wheat (including spelt) and maslin, unmilled	"	10,551,501	10,912,459	8,022,058	1,729,374	1,719,737	1,343,080
Wood chips	"	4,595,223	4,070,746	2,120,710	181,526	169,196	165,578
Wool, carbonised—shorn and skin	"	13,750	11,312	9,566	64,817	50,322	37,387
Wool, carded or combed (tops and other)	"	13,201	13,516	16,176	72,571	78,352	97,787
Wool, greasy	"	531,728	497,566	488,843	1,463,416	1,470,601	1,470,541
Wool, washed and scoured—shorn, skin and boiled	"	55,631	52,312	46,052	240,748	236,900	205,452
Zinc, ore and concentrates . . .	"	458,535	536,495	683,011	81,472	115,276	145,803
Zinc and zinc alloys, unworked . .	"	195,115	208,431	231,671	132,211	167,287	184,043
Total major commodities . .		. .	. .	. .	*13,781,399*	*14,014,099*	*15,525,256*
Total Exports		. .	. .	. .	**19,176,955**	**19,581,480**	**22,205,246**

ASIC industry of origin

Export and import statistics classified by Subdivisions of the *Australian Standard Industrial Classification* (ASIC) have been introduced from July 1980. These statistics are compiled by allocating statistical items of the AECC and AICC to the ASIC industry of origin with whose main economic activities the commodities are primarily associated. A full description of ASIC Classes is contained in the publication *Australian Standard Industrial Classification, Vol. 1—The Classification* (1201.0). For exports, these statistics replace those for Industrial Groups, published previously in this publication. Exports by Industrial Groups ceased to be compiled from 1 July 1980.

EXPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

($ million)

ASIC Divisions/Subdivisions	*1980–81*	*1981–82*	*1982–83* (p)
Agriculture, forestry, fishing and hunting—			
Agriculture	3,941.4	4,016.2	3,465.2
Forestry and logging	2.6	4.2	6.6
Fishing and hunting	21.9	17.4	13.4
Total	*3,966.0*	*4,037.8*	*3,485.1*
Mining—			
Metallic	1,915.7	1,943.0	2,375.1
Coal	1,975.2	2,291.6	3,075.4
Oil and gas	(*a*)	316.7	343.2
Construction materials	0.2	0.3	0.2
Other non-metallic minerals	101.7	94.4	115.5
Total	*3,992.8*	*4,646.0*	*5,909.4*
Manufacturing—			
Food, beverages and tobacco	4,072.1	3,687.0	3,826.7
Textiles	526.3	549.9	617.8
Clothing and footwear	21.6	18.1	20.5
Wood, wood products and furniture	227.3	204.9	203.3
Paper, paperboard, printing and publishing	100.6	94.3	103.0
Chemical, petroleum and petroleum products	853.1	909.5	1,716.8
Non-metallic mineral products	46.5	46.5	43.1
Basic metal products	2,862.4	2,890.1	3,248.8
Fabricated metal products	143.3	174.8	160.8
Transport equipment	473.9	499.9	440.0
Other machinery and equipment	817.4	854.9	1,002.3
Miscellaneous manufacturing	200.5	215.1	214.4
Total	*10,344.9*	*10,145.0*	*11,597.4*
Other industries—			
Wholesale and retail trade, business services	32.3	26.0	34.5
Waste and scrap n.e.s., secondhand goods	(*b*)613.4	445.2	512.3
Total	*645.7*	*471.2*	*546.8*
Total merchandise	*18,949.4*	*19,300.1*	*21,538.7*
Non-merchandise	227.5	281.4	666.6
Total	**19,177.0**	**19,581.5**	**22,205.2**

(*a*) Excludes oil and gas. (*b*) Includes oil and gas.

IMPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION

($ million)

ASIC Divisions/Subdivisions	*1980–81*	*1981–82*	*1982–83* (p)
Agriculture, forestry, fishing and hunting—			
Agriculture	304.3	293.5	317.7
Forestry and logging	1.9	2.4	2.3
Fishing and hunting	4.2	4.8	4.9
Total	*310.4*	*300.7*	*324.9*
Mining—			
Metallic	24.8	24.2	8.4
Coal	0.5	0.2	2.6
Oil and gas	1,500.1	1,815.5	1,899.5
Construction materials	6.8	9.1	8.4
Other non-metallic minerals	204.2	208.2	183.5
Total	*1,736.4*	*2,057.3*	*2,102.5*
Manufacturing—			
Confidential items falling within ASIC classes 0124 to 2963 incl.	..	..	1.3
Food, beverages and tobacco	652.7	774.0	870.0
Textiles	965.2	1,093.8	1,030.4
Clothing and footwear	470.7	578.7	560.7
Wood, wood products and furniture	378.1	443.8	371.4
Paper, paperboard, printing and publishing	851.9	960.9	901.3
Chemical, petroleum and petroleum products	2,638.2	2,829.4	2,783.8
Non-metallic mineral products	347.1	372.6	335.6
Basic metal products	639.2	766.6	722.5
Confidential items falling within ASIC classes 3141 to 3487 incl.	6.4	1.5	0.1
Fabricated metal products	513.6	686.0	574.7
Transport equipment	2,220.0	3,495.4	2,548.9
Other machinery and equipment	5,598.9	6,790.4	6,423.4
Miscellaneous manufacturing	1,094.5	1,265.7	1,211.3
Total	*16,376.5*	*20,058.8*	*18,335.5*
Other industries—			
Wholesale and retail trade, business services	127.9	89.7	77.2
Waste and scrap n.e.s., secondhand goods	239.1	270.7	426.5
Total	*367.0*	*360.4*	*503.7*
Total merchandise	*18,790.3*	*22,777.2*	*21,266.6*
Non-merchandise	174.3	235.8	543.7
Total	**18,964.6**	**23,013.0**	**21,810.3**

Exports and imports by broad economic categories, 1981–82 and 1982–83

The following table shows exports and imports of merchandise classified according to the nineteen categories of the United Nations' Classification, Broad Economic Categories (BEC). The BEC attempts to classify external trade statistics for the purposes of general economic analysis according to the main end use of the commodities traded.

	Exports				*Imports*			
	1981–82		*1982–83p*		*1981–82*		*1982–83p*	
Broad Economic Category	*$million*	*Proportion to total*	*$million*	*Proportion to total*	*$million*	*Proportion to total*	*$million*	*Proportion to total*
FOOD AND BEVERAGES	5,603.2	28.6	5,158.8	23.2	850.5	3.7	940.4	4.3
Primary	2,671.0	13.6	2,105.3	9.5	244.7	1.1	292.5	1.3
Mainly for industry	2,249.1	11.5	1,613.1	7.3	113.0	0.5	119.8	0.5
Mainly for household consumption	421.9	2.2	492.1	2.2	131.7	0.6	172.7	0.8
Processed	2,932.2	15.0	3,053.5	13.8	605.8	2.6	647.9	3.0
Mainly for industry	946.0	4.8	750.0	3.4	97.6	0.4	94.6	0.4
Mainly for household consumption	1,986.2	10.1	2,303.5	10.4	508.2	2.2	553.3	2.5
INDUSTRIAL SUPPLIES n.e.s.	8,394.8	42.9	9,330.8	42.0	5,962.1	25.9	5,437.8	24.9
Primary	4,487.4	22.9	4,993.6	22.5	432.7	1.9	385.4	1.8
Processed	3,907.3	20.0	4,337.2	19.5	5,529.4	24.0	5,052.4	23.2
FUELS AND LUBRICANTS	3,148.9	16.1	4,715.5	21.2	2,949.8	12.8	3,029.1	13.9
Primary	2,289.7	11.7	3,073.1	13.8	1,815.2	7.9	1,901.5	8.7
Processed	859.2	4.4	1,642.4	7.4	1,134.6	4.9	1,127.6	5.2
Motor spirit	108.7	0.6	172.7	0.8	101.1	0.4	136.2	0.6
Other	750.5	3.8	1,470.0	6.6	1,033.6	4.5	991.4	4.5
CAPITAL GOODS (except transport equipment), and parts and accessories thereof	908.4	4.6	991.6	4.5	6,012.0	26.1	5,425.7	24.9
Capital goods (except transport equipment)	621.0	3.2	680.4	3.1	4,368.6	19.0	3,759.9	17.2
Parts and accessories	287.4	1.5	311.2	1.4	1,643.4	7.1	1,665.7	7.6
TRANSPORT EQUIPMENT and parts and accessories thereof	499.3	2.5	472.6	2.1	3,531.0	15.3	2,777.0	12.7
Passenger motor cars(*a*)	13.7	0.1	17.4	0.1	422.3	1.8	449.6	2.1
Other	174.3	0.9	81.7	0.4	1,549.9	6.7	986.7	4.5
Industrial(*a*)	158.7	0.8	53.7	0.2	1,368.0	5.9	833.3	3.8
Non-industrial	15.6	0.1	28.0	0.1	181.9	0.8	153.4	0.7
Parts and accessories	311.3	1.6	373.6	1.7	1,558.8	6.8	1,340.7	6.1
CONSUMER GOODS n.e.s	375.2	1.9	427.4	1.9	3,191.6	13.9	3,210.4	14.7
Durable	108.0	0.6	105.3	0.5	1,082.8	4.7	1,049.6	4.8
Semi-durable	76.2	0.4	82.3	0.4	1,325.6	5.8	1,357.2	6.2
Non-durable	191.0	1.0	239.8	1.1	783.3	3.4	803.6	3.7
GOODS n.e.s.	370.4	1.9	442.0	2.0	280.0	1.2	446.3	2.0
Total merchandise	*19,300.1*	*98.6*	*21,538.7*	*97.0*	*22,777.2*	*99.0*	*21,266.6*	*97.5*
Non-merchandise	281.4	1.4	666.6	3.0	235.8	1.0	543.7	2.5
Total	**19,581.5**	**100.0**	**22,205.2**	**100.0**	**23,013.0**	**100.0**	**21,810.3**	**100.0**

(*a*) Unassembled road motor vehicles are included with parts and accessories of transport equipment. (*b*) For exports, includes petroleum gases.

Direction of Overseas Trade

Exports and imports, by country of consignment or of origin

The following table shows the value and percentage of Australian exports and imports according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on Plate 49 on page 604.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF CONSIGNMENT OR ORIGIN

($'000)

	Exports			*Imports*		
Country	*1980–81*	*1981–82*	*1982–83(p)*	*1980–81*	*1981–82*	*1982–83(p)*
Argentina	55,342	70,516	38,324	6,145	11,988	6,351
Association of South-East Asian Nations—						
Indonesia	358,575	416,744	375,423	416,947	515,885	561,719
Malaysia	442,190	438,127	454,323	168,725	187,718	214,683
Philippines	169,999	194,270	187,574	91,827	88,130	84,010
Singapore, Republic of	513,024	512,995	729,236	507,209	652,302	599,830
Thailand	128,944	134,113	176,432	64,852	72,215	89,436
Total ASEAN	*1,612,734*	*1,696,248*	*1,922,988*	*1,249,559*	*1,516,250*	*1,549,678*
Austria	2,032	2,046	2,233	42,579	52,071	54,886
Bahrain	56,176	68,091	91,591	109,848	76,774	40,138
Bangladesh	61,582	41,776	17,180	19,126	17,060	14,361
Brazil	39,240	20,126	38,464	107,241	136,298	154,735
Canada	434,120	366,614	316,569	500,192	584,925	434,612
China—excl. Taiwan Province	671,201	602,528	611,928	269,789	284,728	278,921
—Taiwan Province only	395,138	445,258	550,088	508,607	631,952	649,568
Czechoslovakia	33,738	37,649	27,816	26,486	32,507	20,426
Egypt, Arab Republic of	409,942	335,874	366,608	172	153	112
European Economic Community—						
Belgium-Luxembourg	171,516	129,896	165,531	119,300	135,282	124,563
Denmark	16,270	14,133	22,541	61,356	82,781	77,619
France	366,305	400,007	498,833	305,229	628,051	454,745
Germany, Federal Republic of	473,718	465,280	548,913	1,079,379	1,355,797	1,300,458
Greece	21,789	15,549	41,783	17,410	18,264	18,893
Ireland	9,604	1,987	2,205	49,833	71,958	97,179
Italy	393,976	393,276	368,397	427,656	506,950	538,172
Netherlands	208,044	210,288	292,126	198,988	357,799	303,349
United Kingdom	715,308	726,376	1,175,706	1,584,479	1,649,235	1,467,787
Total EEC	*2,376,530*	*2,356,792*	*3,116,036*	*3,843,629*	*4,806,117*	*4,382,765*
Fiji	169,566	159,775	175,334	16,240	20,494	23,347
Finland	6,497	10,654	34,930	113,286	135,689	108,449
Hong Kong	309,330	436,932	349,495	394,754	500,351	485,265
India	176,859	312,129	208,955	108,682	118,779	142,317
Iran	196,471	145,076	231,945	33,418	58,738	39,687
Iraq	59,265	179,470	108,516	95,738	3,026	1,729
Israel	28,970	32,342	53,585	48,363	60,402	57,948
Japan	5,227,622	5,351,389	6,007,339	3,629,296	4,527,496	4,504,416
Jordan	8,059	22,690	9,920	5	161	4,116
Korea, Republic of	537,849	681,013	833,261	203,640	300,605	292,829
Kuwait	182,529	117,030	131,869	350,768	269,047	354,386
Libyan Jamahiriya	34,173	43,028	22,699	–	–	–
Mauritius	22,725	19,908	20,373	589	603	1,223
Mexico	38,652	31,418	10,156	16,074	29,742	30,080
New Caledonia	45,923	38,161	47,699	1,941	1,424	793
New Zealand	915,534	1,038,281	1,162,258	636,237	726,202	694,275
Norway	61,168	48,410	112,287	36,415	57,873	33,839
Oman	25,752	28,685	24,448	1	41,474	46,796
Pakistan, Islamic Republic of	36,558	58,019	55,117	14,334	48,154	23,521
Papua New Guinea	433,217	420,126	508,516	73,339	69,909	69,040
Poland	82,454	71,754	69,624	14,404	15,229	10,369
Portugal	12,050	31,813	19,251	17,023	20,293	19,853
Romania	39,396	26,617	8,918	28,339	17,588	57,956
Saudi Arabia	276,471	362,530	344,544	1,032,219	1,193,137	978,448
South Africa, Republic of	132,611	145,539	144,576	110,643	90,701	84,935
Spain	66,379	82,055	73,547	63,666	71,596	65,095
Sri Lanka	53,061	34,426	22,208	11,153	12,217	11,305
Sweden	56,775	57,406	33,968	294,776	321,567	277,736
Switzerland	17,147	20,883	32,890	177,538	213,544	197,391
Turkey, Republic of	10,196	21,314	19,516	3,731	3,959	4,339
Uganda	247	2,064	571	13,313	6,993	6,949
United Arab Emirates	103,405	137,931	129,851	195,245	263,609	398,198
United States of America	2,147,045	2,154,515	2,241,850	4,169,025	5,249,415	4,764,367
U.S.S.R.	831,758	666,213	506,952	8,974	8,637	12,314
Venezuela	10,412	23,186	17,669	186	754	24
Yemen Arab Republic	48,264	53,127	22,437	–	–	–

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF CONSIGNMENT OR ORIGIN—*continued*

($'000)

Country	*Exports* 1980–81	1981–82	1982–83(p)	*Imports* 1980–81	1981–82	1982–83(p)
Yemen, People's Democratic Republic of	34,741	28,510	34,989	–	–	–
Yugoslavia	57,137	50,687	67,153	10,571	16,447	14,210
Zimbabwe	2,362	4,247	5,808	2,259	4,233	3,470
Other countries	451,308	295,783	1,098,436	346,911	376,726	397,364
'For Orders' and Country of origin or destination unknown	79,242	92,826	101,961	8,135	5,353	5,406
Total	**19,176,955**	**19,581,480**	**22,205,246**	**18,964,604**	**23,012,990**	**21,810,338**

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83

($'000)

Division No.	Description	*ASEAN* Exports	Imports	*Belgium-Luxembourg* Exports	Imports	*Canada* Exports	Imports
00	Live animals chiefly for food	15,552	–	–	–	–	3,057
01	Meat and meat preparations	52,861	85	4,025	–	43,659	90
02	Dairy products and birds' eggs	92,149	1	–	147	738	–
03	Fish, crustaceans and molluscs, and preparations thereof	8,009	41,709	502	16	350	15,116
04	Cereals and cereal preparations	177,245	2,355	352	162	117	2,424
05	Vegetables and fruit	47,523	9,602	2,237	535	27,209	8,377
06	Sugar, sugar preparations and honey	115,304	657	859	16	70,566	180
07	Coffee, tea, cocoa, spices and manufactures thereof	15,537	49,205	–	424	33	2
08	Feeding stuff for animals (not including unmilled cereals)	10,358	16,029	8,257	377	40	16
09	Miscellaneous edible products and preparations	5,338	4,472	–	228	138	706
11	Beverages	5,546	158	3	47	1,996	244
12	Tobacco and tobacco manufactures	192	3,885	–	2	–	1,089
21	Hides, skins and furskins, raw	5,193	–	947	–	17	1
22	Oilseeds and oleaginous fruit	1,610	870	96	–	76	4,785
23	Crude rubber (including synthetic and reclaimed)	174	28,884	–	2,296	–	196
24	Cork and wood	157	45,554	2,279	–	69	35,022
25	Pulp and waste paper	243	–	–	–	9	21,351
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric)	21,159	1,136	31,352	193	1,058	5,104
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones)	14,768	679	587	172	253	50,840
28	Metalliferous ores and metal scrap	133,894	3,102	34,423	217	38,767	4,564
29	Crude animal and vegetable materials, n.e.s.	2,912	4,234	665	29	1,497	1,060
32	Coal, coke and briquettes	11,724	–	27,611	–	–	84
33	Petroleum, petroleum products and related materials	134,656	898,892	–	344	1,621	336
34	Gas, natural and manufactured	–	–	–	–	–	–
41	Animal oils and fats	2,488	251	1,246	–	27	–
42	Fixed vegetable oils and fats	166	4,512	–	–	–	5,102
43	Animal and vegetable oils and fats, processed, and waxes of animal or vegetable origin	2,181	22,475	20	–	–	–
51	Organic chemicals	7,627	2,031	92	7,397	39	4,288
52	Inorganic chemicals	12,726	2,142	280	1,633	213	1,653
53	Dyeing, tanning and colouring materials	6,604	199	32	913	87	1,018
54	Medicinal and pharmaceutical products	15,194	3,338	347	2,017	2,318	3,092
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	9,072	593	10	1,251	13	1,719
56	Fertilisers, manufactured	306	34	–	460	–	18,416
57	Explosives and pyrotechnic products	–	–	–	–	1	360
58	Artificial resins and plastic materials, and cellulose esters and ethers	9,314	7,250	112	7,032	27	11,216
59	Chemical materials and products, n.e.s.	10,415	5,311	–	2,096	10	1,193
61	Leather, leather manufactures, n.e.s., and dressed furskins	1,872	440	7	204	441	300
62	Rubber manufactures, n.e.s.	1,534	9,522	3	2,768	2	1,956
63	Cork and wood manufactures (excluding furniture)	719	21,659	5	147	8	1,544
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard	12,616	3,161	–	3,261	50	39,643

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Division No.	Description	*ASEAN* Exports	*ASEAN* Imports	*Belgium-Luxembourg* Exports	*Belgium-Luxembourg* Imports	*Canada* Exports	*Canada* Imports
65	Textile yarn, fabrics, made-up articles, n.e.s., and related products	5,815	43,343	190	7,797	1,123	16,066
66	Non-metallic mineral manufactures, n.e.s.	24,651	7,848	2,112	11,090	323	3,630
67	Iron and steel	102,213	9,346	2,900	1,905	3,884	3,103
68	Non-ferrous metals	113,504	1,616	18,489	643	194	9,511
69	Manufactures of metals, n.e.s.	40,059	18,693	2,589	5,110	1,704	10,572
71	Power generating machinery and equipment	4,728	1,436	12,520	1,510	2,636	10,108
72	Machinery specialised for particular industries	48,433	11,599	489	9,995	2,118	32,778
73	Metalworking machinery	9,481	949	45	1,149	57	468
74	General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.	38,508	21,054	482	13,841	2,041	15,223
75	Office machines and automatic data processing equipment	8,129	3,299	325	2,401	352	14,250
76	Telecommunications and sound recording and reproducing apparatus and equipment	6,007	19,826	15	5,210	141	4,965
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof	18,917	29,862	316	10,178	522	10,378
78	Road vehicles (including air cushion vehicles)	14,688	5,041	722	3,114	346	10,789
79	Other transport equipment	26,769	4,001	10	19	616	2,037
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.	2,146	1,793	–	84	15	1,082
82	Furniture and parts thereof	3,178	13,479	26	327	258	2,170
83	Travel goods, handbags and similar containers	776	6,594	–	2	8	160
84	Articles of apparel and clothing accessories	1,958	23,945	8	622	232	632
85	Footwear	215	8,021	–	–	94	246
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	13,670	3,028	314	671	2,913	5,808
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	41,057	3,498	132	9,429	264	2,325
89	Miscellaneous manufactured articles	19,125	46,966	299	3,506	999	14,078
9A	Commodities and transactions of merchandise trade, not elsewhere classified	212,502	9,048	7,239	946	71,805	16,449
	Total merchandise	*1,721,468*	*1,488,710*	*165,577*	*123,931*	*284,096*	*432,971*
9B	Non-merchandise	239,524	60,565	73	615	1,795	1,692
	Grand total	**1,960,992**	**1,549,275**	**165,650**	**124,546**	**285,892**	**434,663**

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Div. No.	*China-excl. Taiwan Province* Exports	*China-excl. Taiwan Province* Imports	*China-Taiwan Province only* Exports	*China-Taiwan Province only* Imports	*EEC* Exports	*EEC* Imports	*France* Exports	*France* Imports	*Germany, Federal Republic of* Exports	*Germany, Federal Republic of* Imports
00			135	–	109	2,980	16			–
01	84	40	47,723	–	92,264	1,710	10,124	140	10,757	188
02	20	–	35,876	16	7,976	31,838		2,907	32	5,375
03	–	6,922	1,684	7,941	18,497	12,011	6,937	168	529	2,177
04	183,629	1,155	31,926	342	6,867	14,751	875	285	130	2,419
05	437	9,934	1,808	11,396	65,690	16,797	4,663	842	22,510	1,216
06	81,465	79	8	228	10,182	5,401	45	297	3,288	1,107
07		4,963	229	163	77	36,604		525	6	5,288
08	14	1	4,568	196	10,798	4,123	–	2	24	1,250
09	106	1,020	134	1,210	205	6,819	90	853	60	1,083
11	28	84	135	8	7,813	74,252	20	18,213	554	5,203
12	–	–	–	–	2,727	18,513	–	211	–	47
21	4,097	311	6,651	–	125,908	502	49,838	57	13,702	23
22	–	829	1,068	–	4,434	59	–	1	929	4
23	–	8	250	42	122	5,721		1,416	–	422
24	–	10	4,349	121	10,068	560	1,727	20	377	40
25	–	–	339	–	–	1				–
26	162,924	316	67,085	4,244	478,707	8,754	117,095	325	109,648	1,504
27	95	1,274	6,587	14	9,230	5,999	428	78	56	376
28	46,860	290	64,436	–	490,460	776	123,527	103	155,922	207
29	1,004	1,761	952	1,316	16,805	9,313	323	1,436	5,950	1,297
32			163,669	–	423,549	871	100,235	–	26,116	819
33	7	15,948	57	2,645	9,279	34,908	4,731	1,022	–	2,917
34	–	–	–	–	–	113	–	32	–	–
41	6,797	1	3,609	–	13,910	171	9,713		862	2
42	526	603	40	54	1	7,826	–	133	–	1,619

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Div. No.	*China-excl. Taiwan Province*		*China-Taiwan Province only*		*EEC*		*France*		*Germany, Federal Republic of*	
	Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
43	86	14	556	6	1,285	5,847	166	22	482	806
51	41	4,506	2,494	2,766	672	156,771	2	12,789	9	47,637
52	1	4,828	2,264	4,954	551	37,607	1	1,864	139	14,194
53	61	289	318	201	986	35,124	18	2,128	587	14,790
54	24	3,315	4,837	1,364	10,322	96,279	38	6,165	749	33,110
55	134	623	201	1,485	933	38,880	172	16,058	159	7,305
56	29	40	1	–	19	3,438	–	159	–	1,008
57	–	1,419	–	116	–	2,228	–	281	–	266
58	166	1,143	755	12,816	673	131,948	110	9,499	79	32,284
59		3,075	1,042	270	2,737	100,072	20	6,856	1,112	15,212
61	3,993	247	325	4,841	11,003	11,268	38	741	167	1,907
62	-	590	56	7,366	1,617	60,198	5	11,522	936	13,801
63		890	7	23,801	268	7,194	34	1,807	123	2,251
64	3,281	2,072	256	2,102	452	86,907	4	6,929	7	25,916
65	35,387	77,041	7,137	81,074	8,209	148,963	1,451	14,269	870	34,074
66	85	3,433	527	12,075	8,247	148,533	248	17,918	2,479	23,210
67	55,185	487	6,173	9,488	36,698	83,857	8	5,658	3,610	14,239
68	34,860	220	19,671	584	405,263	23,541	20,603	1,142	13,399	6,305
69	2,196	8,437	1,075	47,970	11,342	121,673	745	10,849	1,678	39,261
71	14	717	188	14,457	85,376	176,298	4,291	15,650	19,912	70,067
72	520	199	2,497	7,462	11,866	354,075	1,154	27,256	2,169	150,146
73	17	1,592	286	13,824	2,256	54,918	853	4,562	502	25,079
74	260	1,055	1,869	18,493	12,795	367,458	1,095	31,146	2,427	129,105
75	221	147	59	4,046	8,980	144,081	1,098	6,289	1,098	24,129
76	–	425	62	30,760	43,000	78,178	319	11,289	339	28,905
77	118	1,781	726	18,516	9,615	258,591	722	26,139	2,767	107,497
78	7	112	98	26,520	18,973	296,437	706	19,235	5,122	193,052
79	–	53	2,448	4,316	11,592	162,574	1,806	72,722	242	6,682
81	1	172	55	4,471	284	13,543	–	715	189	3,554
82	11	4,432	65	21,300	650	31,903	22	609	113	4,798
83	-	2,977	33	27,921	25	8,358	–	481	5	539
84	165	54,967	55	80,069	1,055	30,846	330	4,547	101	3,215
85	89	13,710	86	48,432	192	26,573	33	3,835	17	1,422
87	1,504	319	736	3,473	46,640	121,046	12,747	12,231	2,182	47,300
88	4	476	11,368	6,273	3,950	85,480	295	10,856	1,057	25,814
89	74	13,993	1,795	72,167	21,689	312,226	1,794	15,398	3,041	47,464
9A	16,431	1,722	40,214	3,775	459,384	158,916	12,344	35,053	120,823	38,907
Total	*643,059*	*257,064*	*553,651*	*649,489*	*3,045,274*	*4,283,201*	*493,659*	*453,735*	*540,143*	*1,269,836*
9B	733	21,862	54	108	75,471	97,155	1,736	1,030	8,466	28,789
Total	**643,792**	**278,926**	**553,705**	**649,597**	**3,120,745**	**4,380,356**	**495,395**	**454,765**	**548,610**	**1,298,625**

Division No.	Description	*Hong Kong*		*Indonesia*		*Iran*	
		Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
00	Live animals chiefly for food	1,154	–	2,955	–	1,877	–
01	Meat and meat preparations	15,443	10	2,318	–	34,671	–
02	Dairy products and birds' eggs	13,413	–	21,269	–	–	–
03	Fish, crustaceans and molluscs, and preparations thereof	23,532	5,352	264	1,787	–	12
04	Cereals and cereal preparations	31,427	1,184	49,948	64	140,042	–
05	Vegetables and fruit	13,790	1,393	2,748	12	–	418
06	Sugar, sugar preparations and honey	498	352	576	1	–	–
07	Coffee, tea, cocoa, spices and manufactures thereof	2,834	167	372	28,363	–	–
08	Feeding stuff for animals (not including unmilled cereals)	849	2	2,337	55	–	–
09	Miscellaneous edible products and preparations	2,133	3,227	2,133	96	–	–
11	Beverages	2,582	69	934	–	–	–
12	Tobacco and tobacco manufactures	–	34	192	100	–	1
21	Hides, skins and furskins, raw	3,922	–	–	–	–	–
22	Oilseeds and oleaginous fruit	1	192	1,579	27	–	–
23	Crude rubber (including synthetic and reclaimed)	17	–	–	9,664	–	–
24	Cork and wood	53	419	55	2,178	–	–
25	Pulp and waste paper	–	–	63	–	–	–
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric)	6,943	174	6,667	–	3,999	–
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones)	336	16	4,415	29	–	13
28	Metalliferous ores and metal scrap	3,707	127	901	201	–	–

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Division No.	*Description*	*Hong Kong*		*Indonesia*		*Iran*	
		Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
29	Crude animal and vegetable materials, n.e.s.	980	322	129	172	4	20
32	Coal, coke and briquettes	23,188	–	3	–	1,955	–
33	Petroleum, petroleum products and related materials	9,198	190	58,048	508,311	–	37,115
34	Gas, natural and manufactured	–	–	–	–	–	–
41	Animal oils and fats	263	2	457	–	–	–
42	Fixed vegetable oils and fats	17	378	3	–	–	–
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin	560	–	576	–	–	–
51	Organic chemicals	1,047	382	500	419	6	–
52	Inorganic chemicals	317	33	9,136	–	–	–
53	Dyeing, tanning and colouring materials	767	109	1,249	–	–	11
54	Medicinal and pharmaceutical products	8,450	65	1,108	633	663	–
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	4,579	2,076	1,027	135	–	3
56	Fertilisers, manufactured	13	–	4	–	–	–
57	Explosives and pyrotechnic products	–	67	–	–	–	–
58	Artificial resins and plastic materials; and cellulose esters and ethers	1,402	731	3,211	38	–	–
59	Chemical materials and products, n.e.s.	1,169	549	2,742	–	2	–
61	Leather, leather manufactures, n.e.s., and dressed furskins	3,035	856	54	2	–	–
62	Rubber manufactures, n.e.s.	172	507	694	231	–	–
63	Cork and wood manufactures (excluding furniture)	98	544	225	434	–	–
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard	2,533	2,890	2,760	1	–	–
65	Textile yarn, fabrics, made-up articles, n.e.s. and related products	6,506	75,933	1,416	1,410	10,461	1,816
66	Non-metallic mineral manufactures, n.e.s.	9,349	2,864	1,856	367	444	–
67	Iron and steel	8,165	21	22,905	–	12,017	–
68	Non-ferrous metals	14,005	707	52,589	1	7,205	–
69	Manufactures of metal, n.e.s.	8,554	23,919	6,347	39	9	25
71	Power generating machinery and equipment	320	948	430	–	–	–
72	Machinery specialised for particular industries	1,913	594	9,359	4	2,827	–
73	Metalworking machinery	345	140	2,883	–	–	–
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	3,220	6,997	7,152	149	293	–
75	Office machines and automatic data processing equipment	2,654	5,819	160	–	–	–
76	Telecommunications and sound recording and reproducing apparatus and equipment	932	25,247	408	2	7	–
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof	3,623	38,952	1,476	125	557	–
78	Road vehicles (including air cushion vehicles)	807	1,173	5,194	1	2,337	–
79	Other transport equipment	1,230	11,370	3,846	7	–	–
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.	270	4,058	37	14	–	1
82	Furniture and parts thereof	615	2,845	52	282	–	–
83	Travel goods, handbags and similar containers	367	25,680	5	90	–	–
84	Articles of apparel and clothing accessories	1,838	91,936	365	4,397	–	–
85	Footwear	32	3,854	46	542	–	–
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	2,690	2,022	1,661	2	259	–
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	34,887	23,801	285	1	2	–
89	Miscellaneous manufactured articles, n.e.s.	18,770	111,265	479	608	636	31
9A	Commodities and transactions of merchandise trade, not elsewhere classified	38,999	1,542	82,410	79	11,599	8
	Total merchandise	*340,513*	*484,103*	*383,013*	*561,072*	*231,874*	*39,475*
9B	Non-merchandise	9,178	1,205	1,880	304	71	212
	Grand total	**349,691**	**485,308**	**384,893**	**561,376**	**231,945**	**39,687**

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982-83—*continued*

($'000)

Division No.	*Italy*		*Japan*		*Korea, Republic of*		*Kuwait*		*Malaysia*	
	Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
00			2,924	–	11,149	–	52,196	–	4,203	–
01	759	300	397,415	80	130,384	–	6,136	–	15,312	4
02		4,248	44,926	2	1,306	–	4,471	–	23,540	–
03	9,411	747	177,470	25,012	192	4,866	73	–	556	17,650
04	3,048	3,549	246,876	1,386	2,296	15	50,074	–	60,544	37
05	736	6,250	13,716	1,130	3	385	2,459	–	13,603	260
06	196	431	85,404	802	68,991	82	382	–	89,345	20
07	–	1,231	9,727	756	338	16	239	–	11,407	9,948
08	–	35	12,654	126	94	–	6,851	–	1,807	50
09		691	614	2,537	67	300	84	–	1,050	409
11	5	5,953	1,046	668	19	5	17	–	1,473	24
12	–	6	3	15	–	2,092	–	–	–	–
21	43,977	4	38,235	–	4,791	–	4	–	479	–
22	51		540	17	3	2	–	–	3	21
23	–	2	227	2,075	34	–	–	–	49	15,412
24	7	–	160,244	46	2,235	–	–	–	6	30,433
25	–	–	1,122	–	1	–	–	–	–	–
26	140,834	217	501,906	12,115	100,381	58	–	–	11,998	568
27	37	1,608	50,103	8,461	11,081	18	7	–	1,701	1
28	28,517	–	1,321,237	785	134,712	–	–	–	104,331	952
29	2,186	956	6,931	1,552	891	121	44	–	1,109	393
32	66,107		2,004,573	1,115	249,790	–	–	–	3,176	–
33		24,536	31,923	3,613	145	7,011	–	354,024	5,522	49,865
34		37		6	–	–	–	–	–	–
41	136	–	1,325	69	1,621	–	30	–	92	251
42	1	1,252	–	225	–	–	12	–	22	2,019
43		1	248	92	275	–	51	–	182	22,393
51	19	9,175	10,827	73,113	3,823	3,737	–	296	832	715
52	3	1,211	616	33,568	4,083	687	–	–	246	7
53	–	1,066	509	5,339	16	714	1	–	464	1
54	152	9,268	7,428	7,149	945	631	452	–	4,278	1,111
55	156	1,351	1,612	2,420	82	315	20	–	1,831	43
56	–	–	198	740	1,772	–	–	–	11	–
57	–	16	–	118	–	–	–	–	–	–
58	34	9,236	437	54,293	52	2,202	94	–	1,087	795
59	5	1,326	15,977	12,578	710	68	53	–	2,348	230
61	9,420	1,713	485	2,251	2,500	808	11	–	117	29
62	17	8,280	248	89,902	35	14,545	–	–	135	6,313
63	42	937	11	802	10	595	–	–	67	7,960
64	3	21,672	808	54,743	48	3,653	10	–	5,523	156
65	679	32,908	16,194	216,963	7,315	58,776	10	–	822	12,694
66	57	51,214	17,417	73,052	360	4,574	1	–	2,259	723
67	9,376	40,740	34,872	329,099	15,753	36,587	3,238	–	15,213	95
68	7,202	919	63,302	11,387	7,707	1,261	98	–	15,325	408
69	948	13,685	6,656	88,270	481	20,299	1,227	–	8,369	3,011
71	4,604	8,527	1,048	187,246	37	469	123	1	870	13
72	948	43,665	4,765	127,225	913	159	168	–	5,205	263
73	2	8,934	1,509	49,125	40	215	1,165	–	1,129	1
74	262	43,628	2,099	233,718	379	7,190	331	2	4,082	10,694
75	494	15,714	3,235	197,136	11	877	7	–	1,287	15
76	58	7,412	462	507,161	–	12,434	36	–	3,486	2,466
77	336	15,483	3,216	272,663	159	7,551	124	–	5,110	2,625
78	66	20,891	7,162	1,239,204	6,605	1,083	532	–	2,528	816
79	95	626	934	65,034	17	113	76	–	381	33
81	–	4,165	16	6,167	4	382	–	–	678	134
82		20,363	169	3,960	2	1,593	29	–	339	1,690
83	2	5,799	93	1,723	2	8,180	–	–	18	187
84	182	14,863	1,236	8,102	41	36,962	35	–	180	3,811
85	5	19,982	15	347	–	16,924	–	–	28	1,980
87	1,707	4,368	1,591	51,685	1,175	921	22	–	2,497	412
88	202	6,456	2,778	109,772	192	1,597	29	1	1,982	39
89	681	30,765	2,718	151,807	402	23,603	257	62	3,033	3,242
9A	34,314	7,994	626,612	34,343	52,744	4,147	567	–	16,904	726
Total	*368,079*	*536,406*	*5,948,646*	*4,364,888*	*829,215*	*288,824*	*131,845*	*354,386*	*460,175*	*214,148*
9B	236	1,915	16,071	141,559	115	4,032	8	–	19,835	354
Total	**368,315**	**538,320**	**5,964,716**	**4,506,447**	**829,330**	**292,856**	**131,853**	**354,386**	**480,010**	**214,502**

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982-83—*continued*

($'000)

Division No.	*Description*	*Netherlands*		*New Zealand*		*Papua New Guinea*	
		Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
00	Live animals chiefly for food	–	–	13,832	20,398	293	–
01	Meat and meat preparations	11,139	4	903	10,637	31,885	–
02	Dairy products and birds' eggs	1,129	6,763	731	16,790	6,438	–
03	Fish, crustaceans and molluscs, and preparations thereof	499	1,729	3,319	41,402	571	637
04	Cereals and cereal preparations	236	2,224	18,579	6,865	44,100	–
05	Vegetables and fruit	2,845	1,566	14,520	22,786	3,503	–
06	Sugar, sugar preparations and honey	63	728	29,071	3,333	5,454	–
07	Coffee, tea, cocoa, spices and manufactures thereof	47	23,019	862	857	1,739	49,645
08	Feeding stuff for animals (not including unmilled cereals)	798	2	945	758	2,676	–
09	Miscellaneous edible products and preparations	4	1,020	742	3,449	3,219	–
11	Beverages	334	1,244	6,443	4,488	2,554	43
12	Tobacco and tobacco manufactures	2,533	13,236	96	100	5,227	1,450
21	Hides, skins and furskins, raw	7,789	–	1,591	13	138	–
22	Oil seeds and oleaginous fruit	354	6	708	135	36	–
23	Crude rubber (including synthetic and reclaimed)	–	552	1,472	26	7	1,828
24	Cork and wood	1,513	23	4,367	30,808	76	2,221
25	Pulp and waste paper	–	–	55	43,235	27	–
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric)	49,591	723	1,609	23,585	2,076	–
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones)	1,271	188	3,139	643	883	1
28	Metalliferous ores and metal scrap	18,638	39	144	4,052	15	400
29	Crude animal and vegetable materials, n.e.s.	1,377	1,195	4,632	8,727	610	51
32	Coal, coke and briquettes	75,933	10	287	238	5	–
33	Petroleum, petroleum products and related materials	–	1,013	260,170	224	94,137	164
34	Gas, natural and manufactured	–	35	–	–	–	–
41	Animal oils and fats	1,742	65	212	62	3,214	–
42	Fixed vegetable oils and fats	–	3,711	75	52	510	249
43	Animal and vegetable oils and fats, processed, and waxes of animal or vegetable origin	179	3,856	428	78	868	–
51	Organic chemicals	213	15,176	6,932	555	946	1
52	Inorganic chemicals	–	1,258	11,890	230	976	3
53	Dyeing, tanning and colouring materials	11	1,700	4,963	3,650	2,028	–
54	Medicinal and pharmaceutical products	376	2,194	37,015	6,444	2,542	–
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations	15	879	5,773	12,600	5,355	–
56	Fertilisers, manufactured	–	1,159	1,297	3	362	–
57	Explosives and pyrotechnic products	–	–	99	–	17	–
58	Artificial resins and plastic materials, and cellulose esters and ethers	9	13,138	13,933	8,382	3,777	27
59	Chemical materials and products, n.e.s.	941	15,341	9,103	2,462	3,142	–
61	Leather, leather manufactures, n.e.s., and dressed furskins	603	380	4,075	11,622	117	–
62	Rubber manufactures, n.e.s.	–	792	2,492	8,816	1,711	3
63	Cork and wood manufactures (excluding furniture)	19	88	2,229	17,978	357	2,771
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard	6	4,577	13,455	42,663	8,796	–
65	Textile yarn, fabrics, made-up articles, n.e.s., and related products	97	8,245	34,012	69,311	3,245	1
66	Non-metallic mineral manufactures, n.e.s.	814	2,668	13,413	10,948	7,429	79
67	Iron and steel	2,688	1,865	52,410	11,298	22,280	–
68	Non-ferrous metals	35,719	976	38,754	6,654	1,635	–
69	Manufactures of metal, n.e.s.	575	2,632	31,848	34,948	27,104	6
71	Power generating machinery and equipment	2,143	7,656	11,279	1,244	4,653	15
72	Machinery specialised for particular industries	921	12,214	31,284	17,054	19,171	58
73	Metalworking machinery	32	886	4,291	1,556	1,398	–
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	1,032	13,934	39,505	23,004	16,656	7
75	Office machines and automatic data processing equipment	1,252	7,389	17,541	774	10,043	29
76	Telecommunications and sound recording and reproducing apparatus and equipment	585	1,846	3,171	5,143	4,298	16
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof	1,696	14,251	32,143	28,777	17,034	11
78	Road vehicles (including air cushion vehicles)	99	794	104,259	11,958	15,125	72
79	Other transport equipment	4,006	39,132	9,070	3,446	13,459	64
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.	40	233	836	1,107	2,070	5
82	Furniture and parts thereof	21	1,105	2,755	13,344	1,975	36

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Division No.	Description	*Netherlands*		*New Zealand*		*Papua New Guinea*	
		Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
83	Travel goods, handbags and similar containers	1	65	100	1,546	69	-
84	Articles of apparel and clothing accessories .	25	55	2,341	18,420	2,023	191
85	Footwear		11	1,191	4,155	1,560	-
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	1,344	2,931	17,288	4,704	4,430	29
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	77	5,502	18,066	2,378	2,569	3
89	Miscellaneous manufactured articles, n.e.s. .	919	13,293	47,158	41,306	9,821	120
9A	Commodities and transactions of merchandise trade, not elsewhere classified	62,548	5,348	135,865	16,643	71,845	8,400
	Total merchandise	*296,842*	*262,665*	*1,130,770*	*688,865*	*500,284*	*68,635*
9B	Non-merchandise	629	40,877	24,702	5,428	8,037	407
	Grand total	**297,471**	**303,542**	**1,155,472**	**694,293**	**508,321**	**69,042**

Div. No.	*Saudi Arabia*		*Singapore Republic of*		*United Kingdom*		*United States of America*		*U.S.S.R.*	
	Exports	*Imports*	*Exports*	*Imports*	*Export*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
00	79,851		4,976		93	2,980	1,552	574		
01	56,929		30,162	32	41,528	1,049	647,795	177	4,249	
02	48,442		13,812	1	6,604	1,423	8,926	1,792	7,098	
03	668		6,838	5,213	469	4,563	110,329	16,854	–	1,137
04	107,217		38,313	661	2,092	4,298	107	5,849	196,259	–
05	3,111		30,537	278	31,433	2,716	7,505	35,478	–	
06	288		25,176	153	5,622	1,844	71,464	1,413	31,348	
07	537		3,661	5,279	25	5,922	1,411	922	–	–
08	1,358	-	2,058	81	1,720	359	51	15,157	–	
09	585		1,629	1,150	51	1,665	101	9,653	1	–
11	158		2,902	57	6,830	34,718	7,851	8,149	14	120
12			–	–	193	3,313	4	41,814	–	-
21		–	50	–	4,399	324	822	1,174	–	7
22			9	254	2,959	16	1,424	5,923		
23			2	3,686	122	986	118	8,114		
24			96	4,418	4,095	337	380	46,546		
25		-	–	–	–	1	2	7,161		
26	1	–	867	28	27,024	5,773	52,255	14,510	254,515	
27	87		3,134	5	6,819	1,342	911	20,880	-	
28			2,173	1,502	128,941	210	133,240	948	12,015	52
29	510		771	2,121	5,978	3,149	3,073	12,616	–	18
32			14	–	111,008	31	1,187	1,478	–	16
33	10	975,930	61,841	340,715	4,531	5,073	22,236	80,293		
34		373		–	–	10	–	134		
41		–	927	–	207	103	180	56		
42	9		126	264	–	2	3	8,713	–	–
43	42		194	82	437	86	19	2,790		
51		464	1,740	246	328	46,195	328	140,095	–	11
52	1		1,692	117	127	17,289	1,661	27,623	38	1,294
53	4		3,778	103	339	14,155	883	20,966	–	–
54	639		3,597	258	8,219	34,011	10,695	43,321	–	63
55	528		3,773	390	422	11,565	1,394	36,687	–	8
56	1		144	33	19	647	–	50,585	–	3,606
57			–	–	–	1,665	62	4,430		
58	587		4,269	5,422	322	59,143	637	119,852		
59	63		2,965	4,505	529	58,419	32,882	99,241	–	-
61			1,145	121	596	5,963	3,095	1,657	–	1
62			484	1,394	656	22,258	914	40,256	–	6
63	20	-	420	6,670	46	1,417	397	3,921	–	73
64	4	–	2,581	2,899	433	23,807	567	117,136	–	–
65	122		2,305	11,297	4,158	47,621	3,027	107,594	–	498
66	294	–	8,209	1,725	2,394	39,214	8,258	41,458	3	15
67	10,839	–	26,678	7,641	1,364	19,408	55,317	29,151	–	6
68	20,920		12,371	771	307,874	13,518	44,015	15,648	–	221
69	3,831		18,883	10,124	4,194	45,953	14,712	125,716	2	163
71	40		2,532	1,392	41,808	71,333	4,410	248,947	–	477
72	2,208	-	27,007	10,750	5,984	104,626	17,376	453,672	36	1,013
73	1,543	–	4,628	946	820	13,272	1,815	34,257	22	581
74	3,310	10	22,263	8,959	6,936	122,259	14,130	385,609	4	1,090
75	10		6,030	3,209	4,465	47,466	30,861	410,430	18	-
76	409	–	1,811	17,035	41,649	18,750	3,497	88,876	1	9
77	664	–	10,264	22,698	3,622	79,955	11,554	218,196	15	116
78	2,083		4,769	2,262	12,111	59,252	19,105	166,018	–	497
79	1,892		9,972	3,448	5,414	42,711	46,097	353,320	–	–

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1982–83—*continued*

($'000)

Div. No.	*Saudi Arabia*		*Singapore Republic of*		*United Kingdom*		*United States of America*		*U.S.S.R.*	
	Exports	*Imports*	*Exports*	*Imports*	*Export*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
81	-	-	1,416	1,048	50	4,602	54	3,990	-	-
82	652		2,610	5,153	451	4,129	1,061	9,136	-	87
83			730	2,271	16	980	170	1,572	-	-
84	239	-	1,291	1,950	346	7,361	3,092	8,920	-	-
85	-	-	140	859	136	1,269	391	1,177	-	-
87	375	-	7,588	2,486	27,488	45,470	25,672	215,522	49	103
88	245	-	20,962	1,544	2,054	23,213	6,933	120,020	1	51
89	251		12,597	29,323	14,650	190,972	25,866	307,451	-	552
9A	281		54,066	5,425	221,811	61,147	717,535	261,703	1,183	257
Total	*351,859*	*976,777*	*515,977*	*540,454*	*1,115,010*	*1,443,309*	*2,181,409*	*4,663,322*	*506,869*	*12,149*
9B	23	3	216,167	59,389	63,674	23,647	58,876	103,114	83	165
Total	**351,882**	**976,780**	**732,144**	**599,843**	**1,178,684**	**1,466,957**	**2,240,286**	**4,766,435**	**506,952**	**12,314**

Foreign trade by State

The following table shows the value of exports and imports for each State and Territory.

EXPORTS AND IMPORTS BY STATE, 1982–83p
($'000)

State(a)	*Exports*	*Imports*
New South Wales	5,503,634	8,614,832
Victoria	4,362,734	6,987,715
Queensland	4,467,167	1,993,666
South Australia	1,220,720	1,242,902
Western Australia	5,155,238	2,527,669
Tasmania	773,270	179,728
Northern Territory	549,763	215,683
Australian Capital Territory	47,202	11,512
State not available	125,518	36,631
Grand Total	**22,205,246**	**21,810,338**

(*a*) For imports: State in which entry was lodged. The State of lodgement is not necessarily the State in which the goods were discharged or consumed. For exports: State is State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Because of this change in the basis on which statistics by State are derived, figures from 1 July 1978 are not directly comparable with those for previous periods, *see* page 599.

Total import clearances, dutiable clearances, and customs duties collected

The following table shows the value of total import clearances, total dutiable clearances, and the customs duties collected, together with the ratio of total dutiable clearances to total clearances.

TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND CUSTOMS DUTIES

		1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Total import clearances	$'000	10,304,756	11,122,041	13,662,602	16,067,584	18,800,183	22,862,983
Total dutiable clearances	"	4,022,198	4,018,455	4,488,894	9,901,224	11,672,235	13,792,526
Total customs duties collected	"	1,172,424	1,145,388	1,378,923	1,576,736	1,827,031	2,102,501
Ratio of dutiable clearances to total clearance	per cent	39.0	36.1	32.5	61.6	62.1	60.3
Ratio of duties collected to dutiable clearances	"	29.1	28.5	31.1	15.9	15.7	15.2

Excise

Although excise goods have no immediate bearing on foreign trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Australian Customs Service, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in Chapter 22, Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc. on which excise duty was paid in Australia.

QUANTITIES OF PRINCIPAL EXCISABLE GOODS ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA

Article	*1980–81*	*1981–82*	*1982–83*
	'000 litre	'000 litre	'000 litre
Beer	1,913,961	1,934,358	1,856,934
	'000 l al	'000 l al	'000 l al
Spirits—			
Brandy	2,449	2,344	2,223
Gin	519	482	456
Whisky	343	308	284
Rum	1,900	2,381	2,223
Liqueurs	189	197	179
Vodka	656	716	690
Flavoured spirituous liquors	258	288	271
Other	6	7	8
Total spirits (potable)	*6,321*	*6,723*	*6,334*
	'000 kg	'000 kg	'000 kg
Tobacco	1,691	1,575	1,532
Cigars	72	68	56
Cigarettes—machine-made	27,695	28,503	26,989
	'000 litre	'000 litre	'000 litre
Petrol—			
Aviation gasoline—for use in aircraft(*a*)	100,747	114,948	102,803
Aviation gasoline—other(*a*)	11	–	14,184
Gasoline—commercial motor spirit/ethanol blends	107	409	18
Gasoline(*a*)	14,748,722	15,071,068	14,974,387
Aviation turbine kerosene(*a*)	1,148,884	1,195,417	1,145,961
Other kerosene	24	–	1,236
Diesel fuel	2.266,122	2,536,305	6,788,405
	doz. packs '000	doz. packs '000	
Playing cards	57	86	n.p.
	'000	'000	
Cigarette papers and tubes	2,441,711	2,876,805	n.p
	matches '000	matches '000	
Matches	17,890,865	18,193,796	n.p.
	'000 litre	'000 litre	'000 litre
Crude petroleum oil, liquid petroleum and liquefied petroleum gas	25,741,412	25,055,119	23,593,927
	'000 tonnes	'000 tonnes	'000 tonnes
Coal	77,751	86,790	94,877

(*a*) Includes supplies to Commonwealth Government on which excise was paid.

FOREIGN INVESTMENT

Surveys of foreign investment have been conducted since 1947–48 to obtain particulars of certain types of capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of foreign investment in enterprises in Australia and in Australian public authority securities, as well as statistics of Australian investment in enterprises abroad and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of foreign investment are not included in the statistics which follow. Reserves, provisions and similar non-debt liabilities, investment in real estate (except when made through companies or, in other identified cases, when relevant information is available) and loans between Australian individuals and non-resident individuals are not covered. Non-resident deposits in, and foreign borrowings by, Australian trading banks are excluded from foreign investment statistics and are included instead in the non-official monetary item in the balance of payments capital account. Short-term trade credit owing to unrelated enterprises abroad is also excluded, but is included in the trade credit item of the balance of payments capital account.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country of domicile of the foreign investor to whom the enterprises in Australia have the immediate liability. Income payable on foreign investment is classified on the same basis. Country classifications used in relation to Australian investment abroad, and income receivable thereon, attempt to reflect the country in which the investment was made.

Generally, the statistical unit used in foreign investment statistics is the group of enterprises related in terms of Section 7 of the *Companies Act* 1981. This unit is classified by industry on the basis of the major activity of the group as a whole. It should be noted that, because of the broad range of activities of many of the groups covered by these statistics, the classification of foreign investment by industry should be interpreted with some caution. In particular, the classification does not necessarily reflect the industry in which the funds are ultimately employed.

The following are explanatory notes relating to some of the terms used in the tables:

Borrowings: corporate securities (other than corporate equities), loans, advances, deposits, debentures, notes, bank overdrafts drawn, mortgages, trade credit owing to unrelated foreign enterprises for imports with a contractual maturity of over six months.

Branches. Offices in Australia of enterprises incorporated abroad *or* offices in separate foreign countries of enterprises incorporated in Australia. Australian branches of foreign enterprises *include* other Australian offices of foreign enterprises where a branch register is maintained in Australia, but *exclude* enterprises in Australia which are incorporated abroad but which have no business operations in Australia other than an account with a bank in Australia. Foreign branches of enterprises in Australia *exclude* foreign enterprises which are incorporated in Australia but which have no business operations abroad other than an account with a foreign bank. However, the short-term assets represented by the bank accounts abroad are included as Australian portfolio investment abroad for those companies included in the surveys of foreign investment.

Corporate equities: ordinary shares or voting stock.

Direct investment. All investment in branches and subsidiaries by direct investors i.e. head offices of branches, direct shareholders in subsidiaries and other related enterprises.

Enterprises. Incorporated and unincorporated businesses and other organisations including public enterprises, but *excluding* enterprises which have no business operations in a country other than an account with a bank in that country.

Foreign residents. Any individual, enterprise or other organisation domiciled in a country other than Australia. Includes Norfolk Island and other external territories of Australia. Foreign branches and subsidiaries of enterprises in Australia are also regarded as being foreign residents.

Portfolio investment and institutional loans. Investment in enterprises other than direct investment, i.e. investment other than investment by related enterprises in branches and subsidiaries. Includes both corporate equities and borrowings.

Subsidiaries. An *Australian subsidiary* of a foreign enterprise is an enterprise in Australia, other than a branch, in which:

(*a*) a single foreign resident (individual or enterprise) or a group of related enterprises in one foreign country holds 25 per cent or more of the equity, or, if this condition does not apply,

(*b*) residents of one foreign country combined hold 50 per cent or more of the equity, together with other enterprises in Australia which are subsidiaries (in terms of Section 7 of the *Companies Act* 1981) of the Australian subsidiary referred to above.

A *foreign subsidiary* of an enterprise in Australia is a foreign enterprise other than a branch, in which an enterprise in Australia holds 25 per cent or more of the equity. In principle, foreign enterprises in which the combined Australian shareholding is 50 per cent or more would also be included, but it is not practicable to ascertain the total investment by Australian shareholders in individual foreign enterprises.

Undistributed profits of subsidiaries. Equity of direct investors in the net earnings of an enterprise during the year, less tax payable on those earnings and less dividends declared during the year whether relating to earnings of the same year or not. Net earnings are, in general, based on income for taxation purposes. However, certain deductions allowable for taxation purposes (e.g. mining and petroleum exploration expenditure, Export Market Development Allowance, Investment Allowance for Manufacturing Plant, previous year's losses, etc.) are not deducted in calculating net earnings. Undistributed profits of Australian subsidiaries also include undistributed income accruing to the subsidiary from related enterprises in Australia.

Unremitted profits of branches. Net earnings (after tax) during the year, less remittances of earnings to the head office during the year, irrespective of the year to which the earnings relate. Net earnings of branches are, in general, calculated in a similar way to those for subsidiaries. Also included is undistributed income accruing to the branch from other enterprises related to the branch.

More details on foreign investment in Australia and Australian investment abroad are contained in the annual publication *Foreign Investment, Australia* (5305.0).

Foreign investment in enterprises in Australia

The level of foreign investment in enterprises in Australia in recent years is shown in the first table. The two following tables show the inflow of foreign investment each year and the income payable to foreign residents respectively.

LEVEL OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT
($ million)

	Direct investment		*Portfolio investment and institutional loans*		*Totals*	
At 30 June	*Corporate equities (a)*	*Other(b)*	*Corporate equities (a)*	*Borrowings*	*Corporate equities (a)*	*Other*
1977	3,511	4,610	734	3,254	4,245	7,864
1978	3,933	4,913	769	3,621	4,702	8,535
1979	4,401	5,619	836	4,273	5,237	9,892
1980	4,737	6,292	1,048	4,999	5,785	11,291
1981	5,977	7,556	1,490	7,162	7,467	14,718
1982	6,842	9,376	1,861	14,182	8,702	23,558

(*a*) Paid up value only. (*b*) Includes branch liabilities to head office, intercompany indebtedness, and borrowings.

INFLOW OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT
($ million)

	Direct investment				*Portfolio investment and institutional loans*			
Year	*Undistributed income*	*Corporate equities*	*Other(a)*	*Total*	*Corporate equities*	*Borrowings*	*Total*	*Total*
1976–77	655	27	381	1,063	–60	535	475	1,538
1977–78	663	157	227	1,045	–23	305	283	1,328
1978–79	829	–77	590	1,342	132	482	615	1,957
1979–80	1,021	34	518	1,572	698	753	1,451	3,023
1980–81	830	540	1,064	2,434	1,284	2,307	3,591	6,025
1981–82	330	–114	2,137	2,354	632	6,428	7,059	9,413

(*a*) Includes branch liabilities to head office, intercompany indebtedness, and borrowings. Minus sign (–) denotes withdrawal of investment.

INCOME PAYABLE ON FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INCOME ($ million)

	Income payable abroad on direct investment					*Income payable abroad on portfolio investment and institutional loans*			
		Distributed income							
Year	*Undistributed income*	*Remitted profits of branches*	*Dividends payable*	*Interest payable*	*Total*	*Dividends payable*	*Interest payable*	*Total*	*Total*
1976–77 . .	655	290	249	123	1,317	77	192	269	1,586
1977–78 . .	663	314	295	114	1,386	79	237	316	1,702
1978–79 . .	829	294	288	131	1,542	87	306	394	1,936
1979–80 . .	1,021	390	391	174	1,975	98	392	490	2,465
1980–81 . .	830	366	454	164	1,813	187	503	690	2,503
1981–82 . .	330	314	556	243	1,443	171	1,004	1,174	2,617

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by country.

FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY COUNTRY ($ million)

	EEC								
Year	*United Kingdom*	*Other (a)*	*Switzerland*	*U.S.A.*	*Canada*	*Japan*	*ASEAN(b)*	*Other countries*	*Total*
LEVELS OF FOREIGN INVESTMENT									
Corporate equities (c)									
At 30 June—									
1977	1,679	237	150	1,312	134	223	21	489	4,245
1978	1,803	298	148	1,502	129	272	27	522	4,702
1979	2,109	322	182	1,589	121	342	54	518	5,237
1980	2,241	432	228	1,641	152	435	66	590	5,785
1981	2,860	633	300	2,095	185	569	98	727	7,467
1982	3,298	784	319	2,467	201	698	87	847	8,702
Other									
At 30 June—									
1977	2,071	1,094	242	2,827	209	362	98	961	7,864
1978	2,106	1,146	308	3,119	216	529	132	978	8,535
1979	2,476	1,285	422	3,449	247	705	159	1,150	9,892
1980	2,724	1,462	439	4,100	293	888	313	1,072	11,291
1981	3,594	1,697	424	5,338	411	1,286	622	1,346	14,718
1982	5,500	2,316	680	8,098	417	2,263	2,070	2,215	23,558
INFLOW OF FOREIGN INVESTMENT									
1976–77 . . .	384	264	44	613	72	138	−37	59	1,538
1977–78 . . .	408	77	54	609	−13	197	32	−36	1,328
1978–79 . . .	834	89	60	718	−9	277	56	−69	1,957
1979–80 . . .	1,015	402	108	763	52	400	162	120	3,023
1980–81 . . .	2,017	541	337	1,358	134	748	378	513	6,025
1981–82 . . .	2,673	548	213	2,386	49	1,179	1,467	898	9,413
INCOME PAYABLE ON FOREIGN INVESTMENT									
1976–77 . . .	548	56	21	752	36	77	6	90	1,586
1977–78 . . .	636	60	40	823	−4	33	2	113	1,702
1978–79 . . .	784	84	41	862	11	60	7	87	1,936
1979–80 . . .	832	89	53	1,249	−16	121	17	120	2,465
1980–81 . . .	782	108	58	1,206	65	129	29	127	2,503
1981–82 . . .	934	157	48	941	70	217	92	158	2,617

(*a*) Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands. (*b*) Includes Indonesia, Malaysia, Philippines, Singapore and Thailand. (*c*) Paid up value only. Minus sign (−) denotes withdrawal of investment.

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by industry.

FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY INDUSTRY
($ million)

	ASIC Division							
Year	*Mining (Div B)*	*Manufacturing (Div C)*	*Electricity, gas & water (Div D)*	*Wholesale and retail trade (Div F)*	*Finance, property & business services (Div I)*	*Other industries*	*Unallocated(a)*	*Total*
LEVELS OF FOREIGN INVESTMENT								
Corporate equities (b)								
At 30 June—								
1977	644	1,953	–	745	678	226	–	4,245
1978	648	2,147	–	819	797	291	–	4,702
1979	716	2,312	–	1,069	837	303	–	5,237
1980	840	2,431	1	1,151	1,036	327	–	5,785
1981	1,279	2,857	3	1,578	1,378	373	–	7,467
1982	1,443	3,270	4	1,732	1,807	446	–	8,702
Other								
At 30 June—								
1977	1,906	2,272	41	1,361	1,671	613	–	7,864
1978	2,068	2,222	108	1,570	1,743	824	–	8,535
1979	2,270	2,404	381	1,962	1,862	1,012	–	9,892
1980	2,647	2,310	676	2,329	2,091	1,239	–	11,291
1981	3,605	2,911	887	2,794	3,009	1,511	–	14,718
1982	5,562	5,071	1,946	3,793	4,731	2,455	–	23,558
INFLOW OF FOREIGN INVESTMENT								
1976–77	–17	579	12	539	197	227	–	1,538
1977–78	102	282	66	443	210	225	–	1,328
1978–79	76	594	231	736	94	227	–	1,957
1979–80	531	471	298	912	512	299	–	3,023
1980–81	1,320	1,500	266	1,331	1,257	352	–	6,025
1981–82	1,520	2,808	966	1,151	2,058	910	–	9,413
INCOME PAYABLE ON FOREIGN INVESTMENT *(a)*								
1976–77	371	522	–	286	113	25	269	1,586
1977–78	396	428	–	310	213	38	316	1,702
1978–79	354	588	–	421	132	46	394	1,936
1979–80	500	599	–	634	179	64	490	2,465
1980–81	471	628	–	503	147	66	690	2,503
1981–82	53	734	–	367	261	30	1,174	2,617

(*a*) Income payable on portfolio investment and institutional loans is not available by industry and is included in the unallocated column. (*b*) Paid-up value only. Minus sign ( ) denotes withdrawal of investment.

Australian investment in enterprises abroad

The following tables show the levels and outflow of Australian investment in enterprises abroad in recent years, and associated income flows.

LEVEL OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT
($ million)

	Direct investment		*Portfolio investment and institutional loans*		*Totals*	
At 30 June	*Corporate equities(a)*	*Other(b)*	*Corporate equities(a)*	*Borrowings*	*Corporate equities(a)*	*Other*
1977	539	666	72	82	611	748
1978	576	787	75	113	650	901
1979	632	849	72	104	705	953
1980	846	1,035	100	224	946	1,259
1981	945	1,164	129	100	1,073	1,263
1982	1,147	1,442	439	226	1,586	1,668

(*a*) Paid-up value only. (*b*) Includes branch liabilities to head office, intercompany indebtedness and borrowings.

OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT
($ million)

	Direct investment					
Year	*Undis-tributed income*	*Corporate equities*	*Other(a)*	*Total*	*Portfolio investment and institutional loans*	*Total*
1976–77	100	(*b*)	(*c*)156	255	11	266
1977-78	93	—	118	211	18	228
1978-79	160	52	20	232	32	265
1979-80	231	62	139	432	113	545
1980-81	171	151	103	426	29	455
1981-82	147	84	304	534	400	933

(*a*) Includes branch liabilities to head office, intercompany indebtedness and borrowings. (*b*) Separate details of corporate equities not available prior to 1977-78. (*c*) Includes corporate equities.

INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INCOME(*a*)
($ million)

		Distributed income				
Year	*Undis-tributed income*	*Remitted profits of branches*	*Dividends of subsidiaries*	*Interest*	*Total*	*Total*
1976–77	100	25	59	7	91	191
1977-78	93	36	114	3	154	247
1978-79	160	43	88	7	138	298
1979-80	231	52	123	8	183	414
1980-81	171	51	140	5	196	367
1981-82	147	28	110	10	149	296

(*a*) Direct investment only. Minus sign (—) denotes repatriation.

In the following table, Australian investment in foreign enterprises, and associated income flows, are classified by country.

AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY COUNTRY
($ million)

	E.E.C.							
Year	*United Kingdom*	*Other(a)*	*New Zealand*	*U.S.A.*	*Papua New Guinea*	*ASEAN (b)*	*Other Countries*	*Total*
LEVELS OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES								
Corporate equities(c)								
At 30 June—								
1977	48	18	156	61	130	72	126	611
1978	55	22	161	51	153	78	130	650
1979	61	22	149	71	161	95	145	705
1980	92	25	154	114	290	100	171	946
1981	110	27	165	151	288	111	220	1,073
1982	120	32	183	453	352	188	257	1,586
Other								
1977	69	(*d*)	129	111	146	65	(*e*)228	748
1978	125	55	166	124	151	78	203	901
1979	107	66	159	157	138	95	231	953
1980	218	86	162	245	146	125	276	1,259
1981	186	75	172	299	142	145	244	1,263
1982	339	177	221	336	145	205	246	1,668
OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES								
1976–77	31	9	73	53	26	17	57	266
1977–78	69	−1	48	−2	30	37	48	228
1978–79	27	7	22	79	15	46	69	265
1979–80	186	27	38	112	55	39	88	545
1980–81	12	19	96	203	−32	81	75	455
1981–82	195	16	143	440	85	−54	109	933
INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES(*f*)								
1976–77	34	−3	55	5	39	17	45	191
1977–78	30	−3	61	3	63	21	71	247
1978–79	38	(*d*)	66	10	63	37	(*e*)83	298
1979–80	55	13	77	10	119	43	96	414
1980–81	75	21	87	−4	33	67	89	367
1981–82	7	7	97	−17	40	66	96	296

(*a*) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands. (*b*) Indonesia, Malaysia, Philippines, Singapore and Thailand. (*c*) Paid-up value only. (*d*) Not available; included in 'Other Countries'. (*e*) Includes 'Other E.E.C.' (*f*) Details of income receivable are not available for portfolio investment and institutional loans. Minus sign (−) denotes repatriation of investment.

BALANCE OF PAYMENTS

Broadly speaking, the Australian balance of payments is a statistical statement designed to provide a systematic record of Australia's economic transactions with the rest of the world. It may be described as a system of consolidated accounts in which the accounting entity is the Australian economy and the entries refer to all economic transactions between residents of Australia and residents of the rest of the world (non-residents). Such a record is essential to the examination of influences which external factors have on the domestic economy. Balance of payments estimates have always assumed a particular importance in Australia due to the importance of these influences on the Australian economy.

Official estimates of Australia's balance of payments for the period 1928-29 were included in Year Book No. 24, page 755. Except for the war years 1939 to 1945, estimates have since been published at least annually.

Detailed estimates and brief descriptions of the various items included are provided in the annual publication *Balance of Payments, Australia* (5303.0). More timely though less detailed estimates are provided in a quarterly publication *Balance of Payments, Australia* (5302.0) approximately five and a half weeks after the end of each quarter. A monthly publication *Balance of Payments, Australia* (5301.0), showing the major aggregates, is published about eight to nine working days after the end of each month. A comprehensive description of concepts, definitions, data sources and methods used to compile published statistics are contained in the publication *Balance of Payments, Australia: Concepts, Sources and Methods* (5331.0). Changes to concepts, sources and methods since that publication are described in the annual publication *Balance of Payments, Australia* (5303.0) for 1979–80, 1980–81 and 1981–82.

Balance of payments statements cover a wide range of economic transactions which may be broadly divided into three categories. The first category comprises transactions in goods, services and income between residents of Australia and non-residents. The second category relates to financial transactions involving claims on and liabilities to the rest of the world. Because the statement is constructed on a double entry recording basis, a third category described as unrequited transfers is required to provide offsetting entries for one sided balance of payments transactions, such as gifts in cash and kind which have no 'quid pro quo'. Two changes not arising from transactions—specifically changes in Australia's official reserve assets arising from the allocation (or cancellation) of Special Drawing Rights (SDRs) by the International Monetary Fund (IMF) and the monetisation (or demonetisation) of gold—are included by convention, to make the accounts more analytically useful. The first and third of the above categories are combined in what is described as the current account and the second category together with the two changes not arising from transactions are shown separately in what is described as the capital account.

Under the internationally accepted conventions of the double entry system, credit entries are used to record exports of goods and services, income receivable and financial transactions involving either a reduction in the country's foreign financial assets or an increase in its foreign liabilities. Conversely, debit entries are used to record imports of goods and services, income payable and financial transactions involving either an increase in foreign financial assets or a decrease in foreign liabilities. Transactions in a double entry accounting system are reflected in pairs of equal credit and debit entries. Any entries that are not automatically paired are matched by special offsetting entries. Such offsetting entries are required for the category of unrequited transfers and the other changes not arising from transactions referred to in the previous paragraph.

It follows that, in principle, the net sum of all credit and debit entries is zero. In practice, some transactions are not measured accurately (errors), while others are not measured at all (omissions). Equality between the sum of the credit and debit entries is brought about by the inclusion of a balancing item which reflects net errors and omissions.

In principle, transactions and other changes should be valued in the balance of payments at market prices. However, in practice, transactions are generally valued in the statistics at transactions prices because this basis provides the closest practical approximation to the market price principle. The transactions price is the price at which a transaction is recorded in the accounts of the transactors.

Transactions and other changes recorded in the balance of payments should, in principle, be recorded at the time of change of ownership (either actual or imputed). For the current account this is conceived as the time when ownership of goods changes, services are rendered, when undistributed income of direct investment enterprises is earned, and when interest and dividends become due for payment. In the case of unrequited transfers, those which are imposed by one party on another, such as taxes and fines, should ideally be recorded at the time they become due for payment without penalty; whereas others should be recorded when the goods, services etc. to which they are offsets change ownership. For capital account transactions the time of change of ownership is, by convention, normally taken to be the time at which transactions are entered in the books of the transactors. Entries for loan drawings should be based on actual disbursements and not on commitments or authorisations. Entries for loan repayments should be recorded at the time they become due rather than on the actual payment date.

In practice, the nature of the available data sources is such that the time of recording of transactions will often differ from the time of change of ownership. This is particularly true in the case of transactions in goods which are, in the main, recorded at the time that administrative records relating to the movement of the goods across the customs frontier are processed. Where practical timing adjustments are made for transactions in certain goods to ensure that they are recorded in the time period in which change of ownership occurs.

In the first table that follows, the global balance of payments is presented in the conventional two column credit and debit accounting format. In the regional table, however, minus signs are used to denote current account debits and capital account debits (i.e. increases in assets or decreases in liabilities) while the absences of sign are used to denote current account credits and capital account credits (i.e. decreases in assets or increases in liabilities).

For current account transactions, entries for exports of goods and entries for imports of goods are recorded as credits and debits respectively. Likewise entries for transportation credits are recorded seperately from entries for transportation debits and for most other invisible transactions the credit entries are similarly recorded separately from the debit entries. Current account transactions, in this context, are described as being recorded gross. This treatment is in contrast to the recording of transactions and other changes in the capital account which is on a net basis. This means that, for each capital account item shown in the following table, credit entries are combined with debit entries to arrive at a single net result (either a credit or a debit) for the item concerned.

In principle, the items included in visible trade should include all movable goods, with a few exceptions, the ownership of which changes from residents to non-residents (exports) and from non-residents to residents (imports). Items 3 to 10 which are grouped together under the heading 'invisibles' include services, income and unrequited transfers. Invisible credits comprise the value of services rendered by residents to non-residents, the income earned by Australian residents from the ownership of foreign financial assets (e.g. dividends and interest) and from the use of copyrights, licences, etc., by non-residents (e.g. royalties), and the offset entries to the value of cash and kind transferred by non-residents to residents without a quid pro quo (unrequited transfers). Invisible debits are composed of similar transactions, but with the roles of resident and non-resident interchanged.

For capital account transactions, the entries for government capital (items 11 to 13) broadly refer to the capital account transactions of the general government sector (i.e. Commonwealth, State and local government authorities and statutory bodies except for government-owned or controlled (public) trading and financial enterprises). However, it includes the trade credit transactions and some other minor transactions of certain public enterprises which are included in this grouping under other government transactions (item 13). Items 14 to 17, which comprise private capital, broadly refer to the capital account transactions of resident individuals, privately owned trading and non-bank financial enterprises and government owned or controlled (public) trading and non-bank financial enterprises.

The transactions of non-official monetary institutions (item 18) broadly cover the capital account transactions of the privately and government owned trading banks mainly in the form of borrowings (from and by non-residents) and balances (foreign currency held overseas and Australian currency held by non-residents), while item 19, official monetary institutions, covers all capital account transactions with the IMF, all capital account transactions of the Reserve Bank, with foreign central monetary authorities including the Bank for International Settlements; and transactions and all changes (other than those resulting from revaluation) in the holdings of monetary gold and foreign currency assets owned and controlled by the resident central authorities which are available for meeting balance of payments needs.

BALANCE OF PAYMENTS
($ million)

	1979–80		1980–81		1981–82	
	Credit	*Debit*	*Credit*	*Debit*	*Credit*	*Debit*
CURRENT ACCOUNT						
Goods—						
1 Exports f.o.b.(*a*)	18,589	–	18,718	–	19,089	–
2 Imports f.o.b.(*a*)	–	15,829	–	19,169	–	22,374
Balance of trade	*2,760*	–	–	*451*	–	*3,285*
Invisibles—						
4 Transportation—						
4.1 Freight on imports	–	1,521	–	1,717	–	1,960
4.2 Expenditure of non-resident transport operators	1,087	–	1,121	–	1,184	–
4.3 Other transportation	800	1,502	892	1,638	910	1,782
5 Travel	765	1,479	898	1,561	1,030	1,696
6 Government—						
6.1 Australian government—						
6.11 Defence expenditure	–	102	–	108	–	121
6.12 Other expenditure	–	162	–	179	–	200
6.13 Services to non-residents	36	–	30	–	53	–
6.2 Foreign governments' expenditure	87	–	96	–	108	–
7 Miscellaneous—						
7.1 Business expenses	116	169	105	170	121	182
7.2 Other	105	155	143	208	167	242
8 Property income—						
8.1 Direct investment—						
8.11 Undistributed	231	1,021	171	830	147	330
8.12 Distributed	183	955	196	984	149	1,113
8.2 Interest on government loans	–	386	–	373	–	371
8.3 Royalties and copyrights	11	93	32	126	25	135
8.4 Other	237	554	304	744	345	1,255
9 Government transfers—						
9.1 Papua New Guinea	–	250	–	259	–	270
9.2 Other foreign aid	–	270	–	315	–	398
9.3 Social security cash benefits	–	45	–	52	–	65
10 Private transfers—						
10.1 Migrants' funds	160	64	204	73	230	78
10.2 Social security cash benefits	17	–	20	–	19	–
10.3 Other	410	283	487	367	549	413
Balance on current account	–	**2,004**	–	**5,455**	–	**8,860**

BALANCE OF PAYMENTS—*continued*

($ million)

	1979–80		*1980–81*		*1981–82*	
	Credit	*Debit*	*Credit*	*Debit*	*Credit*	*Debit*
CAPITAL ACCOUNT (NET)						
Non-monetary—						
Government—						
11 Securities—						
11.1 Domiciled overseas	187	–	–	101	368	-
11.2 Domiciled in Australia	–	16	21	–	190	–
12 International development financing institutions	–	31	–	48	–	58
13 Other government transactions	–	221	59	–	5	
Private—						
14 Foreign investment in enterprises in Australia—						
14.1 Direct investment—						
14.11 Undistributed income	1,021	–	830	–	330	–
14.12 Other	551	–	1,604	–	2,024	–
14.2 Portfolio investment and institutional loans—						
14.21 Public enterprise borrowings	509	–	394	–	1,076	–
14.22 Other	942	–	3,197	–	5,984	–
15 Australian investment abroad—						
15.1 Direct investment—						
15.11 Undistributed income	–	231	–	171	–	147
15.12 Other	–	201	–	255	–	387
15.2 Portfolio investment and institutional loans	–	115	–	24	–	395
16 Net remittances abroad by life insurance enterprises	2	–	9	–	17	–
17 Trade credit n.e.i.—						
17.1 Marketing authorities	–	379	93	–	83	–
17.2 Other	–	379	–	134	140	–
Monetary—						
18 Non-official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Borrowing overseas	–	14	45	–	87	–
18.12 Other liabilities	164	–	40	–	43	–
18.2 Changes in assets—						
18.21 Advances to non-residents	–	33	14	–	–	27
18.22 Foreign currency balances	26	–	–	133	–	21
19 Official monetary institutions—						
19.1 Changes in liabilities—						
19.11 Use of IMF credit	–	144	–	128	–	–
19.12 Other liabilities	5	–	–	13	6	–
19.2 Changes in official reserve assets	348	–	–	1,101	–	1,364
19.3 Allocation of SDRs	98	–	86	–	–	–
19.4 Other transactions	–	6	8	–	4	–
Balancing item	–	79	1,163	–	902	–
Balance on capital account	**2,004**	**–**	**5,455**	**–**	**8,860**	**–**

(*a*) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation.

BALANCE OF PAYMENTS BY REGIONS

($ million)

	1979–80	*1980–81*	*1981–82*
CURRENT ACCOUNT(*a*)			
Exports f.o.b.(*b*)—			
United States of America	1,991	2,091	2,064
Canada	341	436	361
United Kingdom	943	696	758
Germany, Federal Republic	503	462	453
Other European Economic Community(*c*)	1,269	1,153	1,132
Japan	5,019	5,240	5,313
New Zealand	836	881	1,009
Other OECD(*d*)	252	246	233
Total OECD	11,152	11,204	11,323
ASEAN	1,363	1,541	1,612
Papua New Guinea	347	412	405
Centrally Planned Economies(*e*)	2,051	1,745	1,382
Other countries	3,676	3,817	4,367
Total exports	*18,589*	*18,718*	*19,089*
Imports f.o.b.(*b*)—			
United States of America	−3,634	−4,554	−5,242
Canada	−439	−494	−582
United Kingdom	−1,615	−1,560	−1,663
Germany, Federal Republic	−990	−1,058	−1,284
Other European Economic Community(*c*)	−1,131	−1,198	−1,542
Japan	−2,392	−3,669	−4,424
New Zealand	−538	−629	−719
Other OECD(*d*)	−718	−736	−851
Total OECD	−11,457	−13,899	−16,305
ASEAN	−990	−1,256	−1,455
Papua New Guinea	−85	−73	−69
Centrally Planned Economies(*e*)	−267	−316	−379
Other countries	−3,030	−3,626	−4,166
Total imports	*−15,829*	*−19,169*	*−22,374*
Invisibles (net)—			
United States of America	−1,647	−1,657	−1,313
Canada	9	−72	−78
United Kingdom	−1,214	−1,023	−1,184
Germany, Federal Republic	−168	−145	−186
Other European Economic Community(*c*)	−341	−365	−460
Japan	−182	−298	−449
New Zealand	−6	42	−20
Other OECD(*d*)	−230	−231	−278
Total OECD	−3,779	−3,749	−3,968
ASEAN	−368	−455	−545
Papua New Guinea	−34	−128	−147
Centrally Planned Economies(*e*)	26	37	−34
Other countries	−609	−709	−881
Total invisibles (net)	*−4,764*	*−5,004*	*−5,575*
Balance on current account –			
United States of America	−3,290	−4,120	−4,491
Canada	−89	−130	−299
United Kingdom	−1,886	−1,887	−2,089
Germany, Federal Republic	−656	−742	−1,017
Other European Economic Community(*c*)	−204	−411	−870
Japan	2,445	1,273	441
New Zealand	293	294	270
Other OECD (*d*)	−697	−721	−896
Total OECD	−4,084	−6,444	−8,950
ASEAN	5	−170	−388
Papua New Guinea	228	210	188
Centrally Planned Economies(*e*)	1,811	1,466	969
Other countries	38	−518	−679
Balance on current account	**−2,004**	**−5,455**	**−8,860**

For footnotes *see* end of table.

BALANCE OF PAYMENTS BY REGIONS—*continued*

($ million)

	1979–80	*1980–81*	*1981–82*
CAPITAL ACCOUNT (NET)(*a*)			
Non-monetary sector—			
Government capital movements—			
United States of America	−305	10	−375
Canada	—	−6	—
United Kingdom	6	−32	−60
Germany, Federal Republic	158	−41	91
Other European Economic Community(*c*)	−54	−21	23
Japan	254	72	302
New Zealand	—	—	—
Other OECD(*d*)	−92	−2	564
Total OECD	−32	−20	545
ASEAN	—	2	—
Papua New Guinea	4	4	4
Centrally Planned Economies (*e*)	—	—	—
Other countries	−53	−55	−44
Total government capital movements	*−81*	*−69*	*505*
Foreign investment in enterprises in Australia—			
United States of America	763	1,358	2,386
Canada	52	134	49
United Kingdom	1,015	2,017	2,673
Germany, Federal Republic	89	124	177
Other European Economic Community(*c*)	313	417	372
Japan	400	748	1,179
New Zealand	17	42	−2
Other OECD(*d*)	157	334	247
Total OECD	2,808	5,175	7,081
ASEAN	162	378	1,467
Papua New Guinea	−2	−1	−2
Centrally Planned Economies(*e*)	5	10	6
Other countries	51	464	861
Total foreign investment in enterprises in Australia	*3,023*	*6,025*	*9,413*
Other private capital movements—			
United States of America	−181	−279	−306
Canada	−27	7	4
United Kingdom	−244	3	−209
Germany, Federal Republic	−79	10	23
Other European Economic Community(*c*)	−20	−46	12
Japan	−64	21	21
New Zealand	−23	−77	−163
Other OECD(*d*)	−37	23	11
Total OECD	−674	−339	−610
ASEAN	−42	−135	116
Papua New Guinea	−77	42	−138
Centrally Planned Economies(*e*)	−254	154	14
Other countries	−258	−202	−70
Total other private capital movements	*−1,303*	*−481*	*−688*
Total non-monetary sector transactions—			
United States of America	278	1,089	1,705
Canada	26	135	53
United Kingdom	778	1,987	2,404
Germany, Federal Republic	167	92	290
Other European Economic Community(*c*)	239	351	407
Japan	591	841	1,502
New Zealand	−6	−36	−166
Other OECD(*d*)	28	356	821
Total OECD	2,102	4,816	7,016
ASEAN	120	244	1,583
Papua New Guinea	−75	44	−136
Centrally Planned Economies(*e*)	−249	164	20
Other countries	−260	207	747
Total non-monetary sector transactions	*1,639*	*5,475*	*9,230*

BALANCE OF PAYMENTS BY REGIONS—*continued*

($ million)

	1979–80	*1980–81*	*1981–82*
Monetary sector transactions—			
Net official monetary movements(*f*)	301	−1,149	−1,354
Non-official monetary sector transactions(*f*)	143	−34	82
Balancing item(*f*)	−79	1,163	902
Balance on capital account(*f*)	**2,004**	**5,455**	**8,860**

(*a*) For current account entries minus sign(−) denotes a debit, for capital account items minus sign(−) denotes an increase in foreign financial assets or a decrease in foreign liabilities. (*b*) The amounts shown represent recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (*c*) Belgium, Luxembourg, Denmark, France, Ireland, Italy, Netherlands, Greece. (*d*) Spain, Turkey, Austria, Finland, Iceland, Norway, Portugal, Sweden, Switzerland. (*e*) Albania, Bulgaria, China, Czechoslovakia, Democratic Peoples' Republic of Korea, German Democratic Republic, Hungary, Mongolia, Poland, Romania, the Socialist Republic of Vietnam, and the Union of Soviet Socialist Replublics. (*f*) No regional split is available for these items.

International reserves

The following table shows Australia's official reserve assets as at 30 June for recent years.

OFFICIAL RESERVE ASSETS(*a*)

(*Source:* Reserve Bank of Australia)

($ million)

	30 June		
	1981	*1982*	*1983*
Official reserve assets—			
Foreign exchange—			
United States dollars	1,636	3,395	5,642
Others	587	670	1,258
Special Drawing Rights	46	8	105
Reserve position in IMF	256	—	—
Gold	3,184	2,444	3,744
Total	**5,709**	**6,517**	**10,748**

(*a*) SDRs, and Australia's reserve position in the IMF are based on the IMF basket valuation for the SDR, which is published in terms of US dollars crossed with the representative rate for the Australian dollar in terms of the US dollar. Gold is valued at the average London gold price for the month, converted to Australian dollars at the market rate of exchange applying on the last day of the month. The foreign currency value of all other overseas assets has been based, where applicable, on market quotations. Accrued interest is normally taken into account. Conversion to Australian dollar equivalent is based on market rates of exchange.

VALUES OF EXPORTS AND IMPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CONSTANT PRICES

The following tables show annual values of Australian exports and imports of goods at current and constant (average 1979-80) prices. These estimates are compiled on a balance of payments basis within the framework of the Australian Export Commodity Classification (AECC) and the Australian Import Commodity Classification (AICC). Quarterly figures in original and seasonally adjusted terms are published regularly in the publication *Exports and Imports (Balance of Payments Basis) at Constant Prices, Australia* (5332.0).

A constant price estimate may be thought of as being derived by expressing the current price value of each component transaction as the product of a price and a quantity and by substituting for each actual current price the corresponding price in the chosen base year. There are, however, many transactions recorded in statistics of overseas trade for which it is not possible to apply such an approach. In such cases it is necessary to make assumptions and approximations (e.g. revaluing by means of the price index which is considered to be most closely related to the commodity involved). The published estimates at constant prices should be viewed in this light.

A fuller discussion of the methods used in estimating constant price values and the major approximations and assumptions made in compiling them appears in Chapter 4 of *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

Estimates at current prices are often divided by their corresponding estimates at constant prices to give measures of price change (generally referred to as implicit price deflators (IPDs)). IPDs are derived measures and are not normally the direct price measures by which current price estimates are converted to estimates at constant prices. A more detailed discussion of the nature of IPDs is presented in Appendix B of the publication *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

The published components of exports of goods f.o.b. and imports of goods f.o.b. consist of varying numbers of AECC and AICC divisions and/or sections as shown below.

Exports	*Section or division of AECC*
Rural—	
Meat and meat preparations	01
Cereal grains and cereal preparations	04
Sugar, sugar preparations and honey	06
Wool and sheepskins	Parts of 21, 26 and 65
Other rural	00, 02, 03, 05, 07 to 09, 21 (part), 22 to 25, 26 (part), 29, 4
Non-rural—	
Metal ores and minerals	27, 28
Mineral fuels	
Coal, coke and briquettes	32
Other	33, 34
Metals and metal manufactures	67 to 69
Machinery and transport equipment	7
Other non-rural	1, 5, 61 to 64, 65 (part), 66, 8, 9

Imports	*Section or division of AICC*
Food, beverages and tobacco	0, 1
Fuels	3
Basic materials	2, 4
Chemicals (incl. plastics)	5
Textiles, fabrics, etc.	65
Metals and metal manufactures	67 to 69
Machinery and transport equipment	7
Other imports	61 to 64, 66, 8, 9

EXPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1979-80 PRICES

$ million

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
			At current prices			
Rural exports f.o.b.						
Meat and meat preparations	1,119	1,712	1,729	1,593	1,380	1,675
Cereal grains and cereal preparations	1,330	1,182	2,957	2,339	2,484	1,856
Sugar, sugar preparations and honey	544	466	719	1,199	784	625
Wool and sheepskins	1,292	1,608	1,790	1,920	1,875	1,789
Other (dairy produce, fruit, etc.)	1,065	1,381	1,653	1,636	1,752	1,984
Total rural	*5,350*	*6,350*	*8,847*	*8,687*	*8,275*	*7,929*
Non-rural exports f.o.b.						
Metal ores and minerals	2,400	2,616	3,306	3,409	3,456	3,853
Mineral fuels—						
Coal, coke and briquettes	1,489	1,532	1,686	1,981	2,295	3,077
Other (*a*)	234	316	427	517	873	1,060
Metals and metal manufactures	1,138	1,506	2,027	1,686	1,627	1,914
Machinery and transport equipment	534	645	798	912	1,053	1,150
Other non-rural (*b*)	861	1,107	1,498	1,528	1,510	1,714
Total non-rural	*6,656*	*7,722*	*9,741*	*10,032*	*10,814*	*12,768*
Total exports f.o.b.	**12,006**	**14,072**	**18,589**	**18,718**	**19,089**	**20,697**

EXPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1979-80 PRICES—*continued*

$ million

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
At average 1979-80 prices						
Rural exports f.o.b.						
Meat and meat preparations	2,152	2,256	1,729	1,654	1,596	1,782
Cereal grains and cereal preparation	1,997	1,467	2,957	2,040	2,228	1,597
Sugar, sugar preparations and honey	750	582	719	819	779	850
Wool and sheepskins	1,639	1,892	1,790	1,819	1,701	1,602
Other (dairy produce, fruit, etc.)	1,449	1,598	1,653	1,573	1,652	1,744
Total rural	*7,987*	*7,795*	*8,847*	*7,905*	*7,956*	*7,575*
Non-rural exports f.o.b.						
Metal ores and minerals	3,172	3,222	3,306	3,076	2,824	2,845
Mineral fuels—						
Coal, coke and briquettes	1,511	1,564	1,686	1,824	1,797	2,047
Other (*a*)	488	593	427	471	776	813
Metals and metal manufactures	1,653	1,968	2,027	1,843	1,953	2,247
Machinery and transport equipment	658	728	798	831	857	835
Other non-rural(*b*)	925	1,431	1,498	1,506	1,476	1,563
Total non-rural	*8,407*	*9,506*	*9,741*	*9,551*	*9,683*	*10,350*
Total exports f.o.b.	**16,394**	**17,301**	**18,589**	**17,456**	**17,639**	**17,925**

(*a*) Until 1980-81 excludes division 34. (*b*) Until 1980-81 includes division 34.

IMPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1979-80 PRICES

$ million

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
At current prices						
Food, beverages and tobacco	645	655	791	818	902	1,017
Fuels	1,154	1,129	2,091	2,715	2,995	3,091
Basic materials	539	620	777	821	846	728
Chemicals (incl. plastics)	986	1,168	1,552	1,563	1,813	1,769
Textiles, fabrics, etc.	673	826	950	978	1,094	1,009
Metals and metal manufactures	564	693	864	1,052	1,357	1,193
Machinery and transport equipment	4,281	5,587	5,570	7,559	9,004	8,416
Other imports	2,308	2,709	3,234	3,663	4,364	4,305
Total imports of goods f.o.b.	**11,150**	**13,386**	**15,829**	**19,169**	**22,374**	**21,528**
At average 1979-80 prices						
Food, beverages and tobacco	702	724	791	827	943	951
Fuels	2,008	1,914	2,091	2,007	2,013	1,898
Basic materials	709	742	777	801	829	681
Chemicals (incl. plastics)	1,222	1,441	1,552	1,486	1,652	1,469
Textiles, fabrics, etc.	872	1,007	950	977	1,062	947
Metals and metal manufactures	742	795	864	1,026	1,164	970
Machinery and transport equipment	5,272	5,950	5,570	7,056	8,417	7,171
Other imports	2,847	3,113	3,234	3,476	3,944	3,606
Total imports of goods f.o.b.	**14,374**	**15,686**	**15,829**	**17,656**	**20,024**	**17,693**

Foreign Participation Statistics

Foreign participation statistics include statistics on both foreign ownership and control of enterprises in Australia. Foreign ownership statistics provide a measure of the beneficial equity interest held by foreign residents (individuals and companies) in enterprises in Australia. Foreign control statistics measure whether because of the distribution of voting shares, foreign residents are likely to be in a position to determine key policy decisions of enterprises in Australia.

Following the termination of a previous program of studies in 1978 a program of foreign participation in key industries and economic activities was re-introduced in 1982, commencing with a study of foreign ownership and control of the mining industry and selected mineral processing industries in 1981-82.

Summary results of foreign control from the previous program of studies are published in *Year Book Australia* No. 65 1981 for: manufacturing; mineral exploration other than for petroleum; petroleum exploration; registered financial corporations other than retailers; finance companies; general insurance; life insurance; tourist accommodation; accredited advertising agencies; and research and experimental development (R & D).

Brief explanatory notes and a summary of the main results of foreign ownership and control of the mining industry and selected mineral processing industries in 1981-82, based on information on shareholdings as at 30 June 1982, are given below.

Foreign Ownership and Control of the Mining Industry and Selected Mineral Processing Industries 1981-82

Scope of the Study

The scope of the 1981-82 study for the mining industry is all establishments classified to Division B mining, of the 1978 edition of the Australian Standard Industrial Classification (ASIC) except those in ASIC classes: 1611 Petroleum exploration (own account); 1612 Mineral exploration nec (own account); and 1620 Mining and exploration services nec. The scope of the mineral processing part of the study is all establishments classified to the selected ASIC classes: 2770 Petroleum refining; 2941 Iron and steel basic products; 2951 Copper smelting, refining; 2952 Silver, lead, zinc smelting, refining; 2953 Alumina; 2954 Aluminium smelting; 2955 Nickel smelting, refining; and 2956 Non-ferrous metals nec smelting, refining.

Measurement of Ownership and Control

Foreign ownership in the mining and selected mineral processing industries is measured in terms of the beneficial equity interest (through ownership links) of all identified foreign residents in enterprises which operate mining or mineral processing establishments. In order to calculate the beneficial equity interests of foreign residents whose interests are held through other enterprises in Australia, all relevant ownership links are multiplied together. *Australian ownership* is all ownership not identified as foreign ownership.

To measure the aggregate levels of foreign and Australian ownership in the mining and selected mineral processing industries, operations data (value added, employment, etc.) for each mining or mineral processing establishment have been apportioned between foreign and Australian ownership in proportion to the percentages of foreign and Australian ownership in the enterprise operating the establishment. Data for establishments are then aggregated to obtain totals of foreign and Australian ownership for the relevant industry.

In *control statistics* for the 1981-82 mining and mineral processing study, enterprises are classified to one of four categories of control: foreign control; joint foreign and Australian control; naturalised or naturalising; and Australian control.

An enterprise has been classified to *foreign control* if it has not been granted naturalised or naturalising status under the government's foreign investment policy and if a foreign resident investor (individual, company, or group of related companies) or a foreign controlled enterprise holds at least 25 per cent of its voting shares and there are no equal or larger shareholdings by an Australian resident, an Australian controlled enterprise or a joint foreign and Australian controlled enterprise.

An enterprise has been classified to *joint foreign and Australian control* if it does not have naturalised or naturalising status and either the single largest shareholder has 25 per cent or more of the voting shares and is itself joint foreign and Australian controlled or there are two or more equally large investors (there being no single larger investor) each with 25 per cent or more of the voting shares in the enterprise and:

(i) at least one of these investors is either a foreign resident or foreign controlled enterprise and at least one of these investors is either an Australian resident individual or an Australian controlled enterprise; or

(ii) at least one of these investors is joint foreign and Australian controlled.

An enterprise is classified to *naturalised or naturalising* if it had such status on 30 June 1982 under the government's foreign investment policy and would otherwise be classified to either foreign control or joint foreign and Australian control.

All enterprises not classified as foreign controlled, joint foreign and Australian controlled, or naturalised or naturalising have been classified to *Australian control.*

To measure the levels of control in the mining industry or selected mineral processing industries for each of these four categories of control, the whole of the operations data of establishments operated by an enterprise are allocated to the control category of that enterprise. Data for each establishment are then aggregated to obtain totals for the operations of the relevant industry attributable to each of the four control categories.

Country of Ownership and Control

In the following tables the classifications by country of foreign ownership or control are based on the country of domicile of the immediate foreign investor which may not be the country of domicile of the ultimate foreign investor.

FOREIGN OWNERSHIP AND CONTROL OF THE MINING INDUSTRY 1981–82

	Persons employed at end of June		*Value added*	
	No.	%	$m	%
Foreign ownership—				
USA	9,932	12.5	1,759.3	26.2
UK	15,740	19.7	1,059.3	15.8
Other EEC(*a*)	1,215	1.5	108.3	1.6
Switzerland	657	0.8	63.2	0.9
Japan	2,581	3.2	218.5	3.3
Other	3,077	3.9	233.4	3.5
Total	*33,202*	*41.6*	*3,441.9*	*51.2*
Australian ownership	46,543	58.4	3,274.1	48.8
Total	**79,745**	**100.0**	**6,716.1**	**100.0**
Foreign control—				
USA	7,711	9.7	1,109.4	16.5
UK	14,229	17.8	830.2	12.4
Other	892	1.1	59.1	0.9
Total	*22,832*	*28.6*	*1,998.7*	*29.8*
Joint foreign and Australian control	2,206	2.8	1,501.2	22.4
Naturalised or naturalising	6,991	8.8	387.3	5.8
Australian control	47,716	59.8	2,828.9	42.1
Total	**79,745**	**100.0**	**6,716.1**	**100.0**

(*a*) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

FOREIGN OWNERSHIP AND CONTROL OF SELECTED MINERAL PROCESSING INDUSTRIES 1981–82

	Persons employed at end of June		*Value added*	
	No.	%	$m	%
Foreign ownership—				
USA	7,422	10.4	462.0	18.2
UK	11,986	16.8	451.3	17.8
Other EEC(*a*)	1,658	2.3	56.8	2.2
Switzerland	1,490	2.1	39.8	1.6
Canada	930	1.3	40.1	1.6
Other	3,934	5.5	125.0	4.9
Total	*27,420*	*38.4*	*1,174.9*	*46.3*
Australian ownership	43,991	61.6	1,365.4	53.7
Total	**71,411**	**100.0**	**2,540.3**	**100.0**
Foreign control—				
USA	10,279	14.4	737.4	29.0
UK	6,006	8.4	257.0	10.1
Other	1,903	2.7	55.8	2.2
Total	*18,188*	*25.5*	*1,050.3*	*41.3*
Joint foreign and Australian control Naturalised or naturalising	2,045	2.9	54.7	2.2
Australian control	51,178	71.7	1,435.3	56.5
Total	**71,411**	**100.0**	**2,540.3**	**100.0**

(*a*) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

Further information

A subscription service is available from the Australian Bureau of Statistics to provide for the detailed requirements of individual users of foreign trade statistics. These special periodical statements are obtainable monthly or quarterly and show trade according to items of the Australian Export and Import Commodity Classifications or statistical key code dissections of Australian Customs Tariff items. An appropriate charge is made which varies depending on the amount of detail required.

BIBLIOGRAPHY

ABS publications

Australian Export Commodity Classification (1203.0)
Australian Import Commodity Classification (1204.0)
Balance of Payments, Australia (monthly) (5301.0)
Balance of Payments, Australia (quarterly) (5302.0)
Balance of Payments, Australia (5303.0)
Foreign Investment, Australia (preliminary) (5304.0)
Foreign Investment, Australia (5305.0)
Foreign Investment in Enterprises in Australia (quarterly) (5306.0)
Foreign Investment in Enterprises in Australia (preliminary) (quarterly) (5307.0)
Foreign Ownership and Control of the Mining Industry and Selected Mineral Processing Industries, Australia (5317.0)
Balance of Payments, Australia: Concepts, Sources and Methods (5331.0)
Exports and Imports (Balance of Payments Basis) at Constant Prices, Australia (quarterly) (5332.0)
Exports by Commodity Divisions, Australia (preliminary) (monthly) (5402.0)
Exports of Major Commodities and Their Principal Markets, Australia (monthly) (5403.0)
Exports, Australia (monthly) (5404.0)
Imports by Commodity Divisions, Australia (preliminary) (monthly) (5405.0)
Imports, Australia (monthly) (5406.0)
Overseas Trade, Australia, Part 1: Exports and Imports (5409.0): microfiche edition (5428.0)
Overseas Trade, Australia, Part 2: Comparative and Summary Tables (5410.0): microfiche edition (5429.0)
Australian Exports, Country by Commodity (5411.0) microfiche edition (5430.0)
Australian Imports, Country by Commodity (5414.0) microfiche edition (5431.0)
Imports of Assembled New Passenger Motor Cars, Australia (preliminary) (monthly) (5416.0)
Exports and Imports, Australia: Trade with Selected Countries and Major Country Groups (quarterly) (5422.0)
Exports of Major Commodities and Their Principal Markets, Australia (5423.0)
Exports, Australia: Annual Summary Tables (5424.0)
Customs and Excise Revenue, Australia (monthly) (5425.0)
Imports, Australia: Annual Summary Tables (5426.0)
Customs and Excise Revenue, Australia: Annual Summary Tables (5427.0)

Other publications

DEPARTMENT OF INDUSTRY AND COMMERCE
    Australian Customs Tariff
    Customs (Prohibited Imports) Regulations
    Customs (Endangered Species) Regulations

CHAPTER 25

SCIENCE AND TECHNOLOGY

Introduction

Science and technology directly influence the strength and competitiveness of industry by providing a basis for technological change and thereby encouraging economic growth and development. They can be seen as making major contributions to the achievement of many of Australia's social, economic and industrial goals.

The Government's conviction of the importance of science and technology is reflected in the role and functions of the Department of Science and Technology. Apart from having general responsibility for science and technology, the Department is concerned with the development and maintenance of Australia's scientific and technological capability. Rapid and continuing advances in key technologies, such as micro-electronics and biotechnology, make it imperative that technology policy issues be co-ordinated if Australia is to improve—let alone retain—its share of world markets.

In this context, the Commonwealth Government has identified sixteen high-technology ('sunrise') industries which seem to offer good prospects for development as wealth generators. These industries are in the areas of biotechnology, personal computers, computer software, custom-made computer chips, scientific instrumentation, medical technologies, lasers, communication technology, industrial ceramics, solar technology, shape memory alloys, fusion, robots, intermediate technology projects, hydrogen generation and storage, and biomass. In July 1983 the Government commissioned a major study to evaluate the opportunities for Australia in certain of these key industries.

The Department of Science and Technology

Scope and Policy

The portfolio of the Minister for Science and Technology covers the Department of Science and Technology (with a staff of about 3,200), the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Australian Industrial Research and Development Incentives Board (AIRDIB), the National Standards Commission, the Australian Institute of Marine Science and the Anglo-Australian Telescope Board. The Department maintains close links with all five organisations.

The Department of Science and Technology was established in November 1980, with a brief to develop the science and technology policy roles which had been brought together for the first time in Australia's history, and to integrate those roles with the industry-oriented programs of the former Department of Productivity.

The Department advises the Minister on a range of policy issues, proposals and submissions from interested parties. It also presents submissions to Parliamentary and other inquiries of relevance to the Department's role and responsibilities. It has regular contact with other Commonwealth and State government departments and statutory authorities in order to assist integration of science, technology and innovation policies with industry, economic and social policies.

The Department helps to stimulate technology in Australia and ensures that Government policies are relevant to the needs of research institutions and industry. Although the Department's activities vary according to Government policy, all current programs can be grouped under the following objectives:

- to stimulate scientific research and technical development in industry, government and academic sectors;
- to facilitate the effective application of technology and the development of technologies having special significance for Australia's industrial growth;
- to facilitate invention and innovation;
- to promote Australia's interests through international co-operation in science and technology;
- to ensure that science and technology issues are considered in the development of government policies, particularly industry and economic policies;
- to improve community awareness of issues relating to science and technology;

- to carry out Australian Government policy as it relates to Antarctica (see entry on Antarctic Division, p 656);
- to provide the national meteorological service (see entry on Meteorology, p 645);
- to provide the national ionospheric prediction service (see entry on Ionspheric Prediction Service, p 646);
- to provide a Government analytical service (see entry on Australian Government Analytical Laboratories, p 645);
- to provide support for foreign space agencies and a national earth-resource satellite system (see entries on p 660 and p 646);
- to provide a national industrial property service to Australia, and to developing countries under international arrangements (see entries on p 642 and p 659).

Technology Development

The Department develops and applies various programs to encourage manufacturing industry to become more competitive and export oriented. One such program is the Manufacturing Technology Development Program which fosters the development and promotion of innovative manufacturing technologies. Projects being undertaken within this program include the development of robots, photovoltaic cells and computer-aided manufacturing techniques.

Departmental activities encourage the innovative use of technology; in the field of biotechnology, for instance, the Department seeks to promote close co-operation among researchers, financiers and others interested in the commercial development of genetically engineered organisms.

An important Departmental function is the promotion of an entrepreneurial attitude to the commercialisation of new products and processes. With the Department's assistance, the Victorian Chamber of Manufacturers has established an Innovation Centre which promotes interaction between inventors and manufacturers, and facilitates the introduction of new products and processes to the manufacturing industry. The Centre gives inventors access to the information, expertise, services and facilities needed to carry inventions from the initial stage of technical and economic evaluation to the market place. Similar centres have been established in New South Wales and Western Australia, and are being planned in other States. As well, the Department administers the Assistance to Inventors' Scheme which supports individuals with grants and advice to develop inventions.

The Department is responsible for a number of programs aimed at transferring technology from innovative sources to manufacturers. These programs are concerned with information technology awareness, manufacturing technology transfer and the formation and support of research associations.

On the initiative of the Minister for Science and Technology, a National Technology Conference was organised by the Department in Canberra in September 1983; the conference was attended by representatives from industry, trade unions, universities, the CSIRO and Commonwealth and State government departments. Its aims were to achieve greater awareness of the range and speed of the technological revolution, and to work out strategies enabling Australia to profit from this revolution. The conference has provided a basis for the development of a National Technology Strategy.

Financial Support for Research

The Department administers three categories of funding schemes in support of:

- Basic research, through the Australian Research Grants Scheme (ARGS);
- Industrial research, through the Australian Industrial Research and Development Incentives Scheme (AIRDIS);
- Mission-oriented research, for instance through the Marine Sciences and Technologies Research Grants Scheme.

ARGS: The ARGS provides support for basic research in a range of subjects at universities and other non-government institutions. ARGS grants for 1984 total $22.4m. In addition, under the Queen Elizabeth II Fellowships Scheme, up to 10 two-year post-doctoral fellowships are provided for young scientists to carry out research in the physical and biological sciences at institutions in Australia.

AIRDIS: Under the Industrial Research and Development Incentives Act, three forms of assistance are available to industry: commencement grants, project grants and public interest projects. Commencement grants, each available for five years and with an annual limit of $40,000, encourage the growth of industrial R & D capability in mainly small and medium-size companies. Project grants, with an annual limit of $750,000 per company, assist companies with an established R & D capability to undertake specific and significant R & D projects. Public interest projects involve the placement of contracts by the Commonwealth for work on industrial research projects with the potential to benefit Australia. Projects in progress cover water treatment, food processing, agricultural technology, biomedical engineering, processing technologies of metals, the use of computers and micro-electronics in heavy engineering and information applications, and a $3.4m feasibility study for STARLAB (a joint Australian-Canadian-US proposal to place a telescope in earth orbit in 1989). Total funds provided for AIRDIS grants and projects in 1983–84 were $71.6m.

Mission-Oriented Research: Grants are made to a number of organisations in aid of research or service to the community. In particular, there is active Government support for marine research. The Marine Sciences and Technologies Research Grants Scheme assists universities and other organisations with projects involving, for example, the Great Barrier Reef, Bass Strait and the North West Shelf; Queen's Fellowships in Marine Science provide post-graduate research opportunities at Australian institutions. Through the portfolio of the Minister for Science and Technology, a total of about $20.9m was provided for marine research in 1982–83; recipients of funds included the CSIRO, the Australian Institute of Marine Science, The Department's Antarctic Division and individual research workers.

The Patent, Trade Marks and Design Office

This Office is part of the Department of Science and Technology. It administers systems for the protection of inventions, the registration of trade marks and industrial designs and provides a patent information service. This service publicises information on technology by disseminating information contained in patent specifications. The Office contributes advice and expertise to other areas of the Department and to government agencies involved in encouraging inventions and technological innovation. It also represents Australia's interests in the World Intellectual Property Organisation (a United Nations agency) and a number of important international treaties concerned with industrial property, notably the Patent Co-operation Treaty (PCT).

In Canberra, the Office maintains the largest technology library in the Southern Hemisphere, with some 22 million patent documents from about forty countries. Access is provided to interested persons and a selected coverage is available through the State branches.

Each year the Office examines about 8,000 patent applications, 15,000 applications for registration of trade marks and 2,500 applications for registration of industrial designs. It also issues about 200 international search reports a year for international applications under the PCT. With further computerisation of information management systems, these levels are expected to increase.

For details of the Australian Patent Information Service, see Resources and Services in this chapter.

Advice and Co-ordination

National Advisory Bodies

Australia has several agencies with policy and funding responsibilities for various aspects of science and technology. In order to achieve integration of advice, relative assessment of priorities and the development of broad strategies for future directions, several national advisory bodies, in addition to government departments such as the Department of Science and Technology and the Department of Resources and Energy, have been established; the major ones are:

- The Australian Science and Technology Council;
- The National Energy Research, Development and Demonstration Council (See Chapter 18, Energy);
- The Australian Manufacturing Council.

Australian Science and Technology Council (ASTEC): ASTEC was established as a statutory authority in February 1979 under the Australian Science and Technology Council Act 1978. The Council reports to the Prime Minister and is the Government's principal source of independent advice on science and technology matters. As part of this role, it maintains an overview of the science and technology activities of Commonwealth Government departments and agencies, universities and private enterprise.

The functions of the Council are to investigate, and to advise the Commonwealth Government on matters relating to science and technology, such as:

- the advancement of scientific knowledge;
- the development and application of science and technology in relation to the furtherance of the national well-being;
- the adequacy, effectiveness and overall balance of scientific and technological activities in Australia;
- the identification and support of new ideas in science and technology likely to be of national importance;
- the practical development and application of scientific discoveries;
- the fostering of scientific and technological innovation in industry; and

- the means of improving efficiency in the use of resources by the application of science and technology.

Australian Manufacturing Council (AMC): The AMC was established in 1977. New arrangements, enlarging the role of the Council were instituted by the incoming Government in 1983. The Council advises the Minister for Industry and Commerce on matters of concern to the manufacturing sector and acts as a forum for discussion and consultation on such matters.

Other official advisory bodies have been established to deal with activities, interests and responsibilities of the Commonwealth Government and its agencies, and to advise on Government support of higher education and of industry. Amongst these bodies are the National Health and Medical Research Council; the CSIRO Advisory Council and its State Committees; the Rural Industry Research Fund Advisory Committees and the Commonwealth Tertiary Education Commission.

Other Organisations

Advice to government on scientific and technological issues comes also from various learned and professional bodies. Advice may be offered on the initiative of the organisation itself or in response to an official request. For example, the Australian Academy of Science maintains a number of national and standing committees which specialise in selected broad fields of science; ad hoc advisory committees are appointed by the Academy to examine and report on specific matters.

Since 1967 the Academy has maintained a Science and Industry Forum which brings together leading scientists and industrialists to discuss topics of national significance; a complementary Science and Society Forum was inaugurated in 1973. Communication between government and the technology area of the science-technology spectrum is facilitated by the Australian Academy of Technological Sciences.

The most broadly based of the learned and professional bodies is the Australian and New Zealand Association for the Advancement of Science (ANZAAS) which is concerned with all fields of the natural and social sciences. It encourages interdisciplinary communication and information dissemination through national conferences, State programs and the bi-monthly magazine, Search.

There are a number of groups within the industry sector—eg. the Australian Industrial Research Group (AIRG) and some specialist panels (Industry Advisory Councils) of the Australian Manufacturing Council (AMC)—which, from time to time, provide advice to government on industrial research and development.

Intergovernmental co-ordination is effected through Ministerial councils established for the purpose. While some of these councils are concerned with promoting research and scientific and technical services, they do not directly undertake research or provide services. Typical of these bodies are the Australian Agricultural Council, the Australian Minerals and Energy Council, the Australian Water Resources Council, and the Australian Environment Council. In some instances, councils have control of research funds and provide grants or arrange for projects to be undertaken in particular fields of interest.

In some scientific and technical fields not coming directly within the scope of the Ministerial councils, there are standing arrangements at agency level for consultation and co-operation (the Electricity Supply Association of Australia is an example).

The Building Research and Development Advisory Committee is the main link between private industry and the CSIRO Division of Building Research, the Department of Housing and Construction, and the Physical Working Environment Branch of the Department of Employment and Industrial Relations.

The Australian Water Resources Council (AWRC) was established in 1963 and is a Commonwealth and State Ministers' forum for dealing with water resources matters. Commonwealth and State collaboration through the AWRC has concentrated on resources assessment and research, but more recently the Council's functions have been expanded to include management and planning. The AWRC and its committees have provided an important contribution to the development of Commonwealth water policies and programs and, in many cases, provide the means of implementing them.

The Department of Resources and Energy administers a water research program, developed through the AWRC and funded by the Commonwealth at a cost of about $600,000 a year. The program covers basic and applied research into all aspects of water resources and is used to stimulate new work not handled elsewhere. In 1982 the Commonwealth Government decided to end the program when the then current projects were completed.

Resources and Services

Although power to regulate the development and utilisation of Australia's natural resources rests largely with the States, the Commonwealth Government, in part because of its jurisdiction in the control of Australia's overseas trade, also plays an important role. Extensive machinery exists for consultation and collaboration between the Commonwealth and State governments in relation to the development and management of natural resources.

Several important resources and services are dealt with elsewhere in this Year Book and are thus not included in this chapter. These include Health (Chapter 10), Agricultural Industries (Chapter 13), Forestry and Fisheries (Chapter 14), Water Resources (Chapter 15), Mineral Industry (Chapter 16), Transport and Communications (Chapter 20) and Environment (Chapter 26).

Soil Resources

A Standing Committee on Soil Conservation was established in 1946. It comprises the heads of soil conservation bodies in the States and representatives of the Department of Primary Industry and the CSIRO. The Committee advises the Australian Agricultural Council on matters relating to soil conservation.

Australian Government Analytical Laboratories (AGAL)

AGAL, part of the Department of Science and Technology, provides valuable chemical and microbiological research and services to assist the Commonwealth Government in protecting public health, collecting import duties, enforcing laws against importing illicit drugs and certifying the quality of exports.

With laboratories in Sydney, Melbourne, Adelaide, Perth and Hobart, AGAL conducts more than 160,000 tests a year, mainly for Commonwealth bodies such as the Department of Primary Industry (primary produce), the Australian Customs Service (goods for tariff classification, trade description, spirits, unsafe goods, fertilisers and illicit drugs) and the Department of Health (pharmaceuticals, food, narcotics, sunscreen preparations and cigarettes).

In recent years AGAL has undertaken species testing of meat; detected substitution of barramundi with cheaper fish, and adulteration of honey and spirits; examined salami sausages in connection with a food-poisoning outbreak in Victoria; and analysed imported wound dressings and locally produced powdered infant foods for bacterial contamination.

The laboratories' chemists work closely with the Australian Federal Police in analysing suspected illicit substances and drugs, and providing expert testimony in court cases. AGAL also co-operates with CSIRO, Commonwealth Serum Laboratories, National Biological Standards Laboratory, Standards Association of Australia, National Association of Testing Authorities and a number of international bodies.

Australian Patent Information Service (APIS)

APIS exists to encourage and assist industry to extract technological information from the major industrialised nations' patent specifications. APIS information Officers based in Canberra, Melbourne and Sydney can assist industry by conducting technology searches, by providing information on the activities in specialist fields and by providing general overviews of particular technology areas, etc.

Recent initiatives have included improvement of public-search files in Patent Sub-offices, in particular US and UK patent files and Australian design files; and a solar-energy evaluation of patent literature conducted by the Technological Evaluation Unit. APIS provides its information on a fee-for-service basis, and quotations will be provided prior to the commencement of a technology search or competitor watch service.

Meteorology

The Bureau of Meteorology, part of the Department of Science and Technology, operates under the *Meteorology Act 1955*. As Australia's national meteorological authority, its basic mission is to explore Australia's weather and climate and to apply the knowledge gained to the provision of meteorological services to meet Australia's national needs and international obligations.

The Bureau has an operational staff of about 1,650 personnel employed throughout Australia and its Territories (including Antarctica). It has a Head Office in Melbourne, Regional Forecasting Centres in each capital city, Canberra and Darwin, 28 Weather Service Offices at major airports and RAAF bases, and 35 observing offices at other centres.

Users of Bureau services include the general public, defence forces, civil aviation and marine authorities, and specialist groups in primary and secondary industries. Apart from forecasting services, the Bureau satisfies many requests for data from the National Climatological Data Bank.

Programs of research are carried out in support of these services, often in co-operation with other institutions concerned with atmospheric science, including universities, the CSIRO and the Australian Numerical Meteorology Research Centre. Major research topics include numerical modelling techniques for predicting atmospheric behaviour, better use of data derived from satellites, tropical cyclones and cold fronts.

Ionospheric Prediction Service (IPS)

The Ionospheric Prediction Service Branch of the Department of Science and Technology assists users of radio communications to achieve the most effective and efficient use of radio communication which is influenced by or dependent on the ionosphere. The Branch operates ionospheric and solar observatories in Australia and Papua New Guinea, and produces radio propagation predictions and warnings of ionospheric and magnetic disturbances. The IPS also conducts research into physical phenomena affecting the ionosphere and into radio wave propagation.

National Materials Handling Bureau

The National Materials Handling Bureau of the Department of Science and Technology carries out research, development and promotion relating to the application of improved materials handling, including the equipment, systems, standards, methods, management and control aspects involved in the supply, production, movement, packaging, storage and distribution of goods and materials.

Satellite Remote Sensing

In 1978 the Commonwealth Government decided to establish facilities for receiving and processing information from the US National Aeronautics and Space Administration's series of Landsat satellites. The Department of Science and Technology operates the facilities. A data-acquisition station is located at Alice Springs, with a data-processing facility in Canberra. Additional information on Landsat stations is provided in Year Book No. 64, pp. 722-724.

Scientific and Technological Information Services

Scientific literature and technical information for scientists and technologists is provided through library and information services provided by the Commonwealth of Australia, State Government instrumentalities, tertiary institutions and industrial organisations. The more important scientific libraries and information services within the Commonwealth sector are the National Library of Australia, the CSIRO Library network and information services, and the libraries and information services maintained by the Department of Health and the Australian Atomic Energy Commission.

Several Commonwealth agencies, including the Australian Atomic Energy Commission, the Australian Road Research Board and the National Library of Australia, are now offering Australian users access to bibliographic data bases via a commercial computer servicer bureau (AUSINET). The Australian Mineral Foundation provides an earth-resource data base. The National Library of Australia and the Department of Health operate a national health information network, the Australian Medline Network. The CSIRO provides access to data bases on CSIRONET. The Overseas Telecommunications Commission is operating an international data transmission service known as MIDAS (Multimode International Data Acquisition Service) which has facilitated low-cost access to international data stores in North America and Europe.

Another overseas trend in which Australian scientists are showing interest is the development of numerical data bases which provide quick access to factual data. The CSIRO is currently operating Thermodata, a metallurgical thermodynamic data base and other similar data bases in crystallography and mass spectra data. Similar numeric and factual data bases are at present being evaluated by other Commonwealth agencies.

A number of Australian scientific and technological indexes and directories now exist or are in the course of production by Commonwealth Government departments and agencies. Recent initiatives are:

- a computer-based register of Australian energy research, development and demonstration projects containing an outline of the objectives, methodology and status of each project. The register is maintained by the CSIRO on behalf of the Department of Resources and Energy and contains references to nearly 1 000 projects. It is used to generate annual updates of the Compendiums of Australian Energy Research Development and Demonstration Projects;
- a national directory of current Australian marine research. The Directory of Australian Marine Research in progress, is a joint publication by the Department of Science and Technology, the Victorian Institute of Marine Sciences and the Great Barrier Reef Marine Park Authority. The Directory identifies individuals and organisations undertaking marine research and provides details of their objectives, methodology, publications, current status and funding.

- a computerised bibliographic data base, STREAMLINE, providing references to published and unpublished documents and current research projects on all facets of water and wastewater in Australia, has been established by the Department of Resources and Energy in association with State water agencies. The data base is publicly available on AUSINET, and a regular current awareness bulletin and a directory of research projects are produced.

Technology Transfer Council (TTC)

The TTC was established initially for a three-year pilot period in 1979 to provide a technical referral program aimed at utilising the technological expertise resident in academic, government and private research institutions and to assist in the effective use of existing technology in Australian industry. A network of eight centres in the five major mainland capitals is initially assisting the metals manufacturing industry. The focus is on small-to-medium-size firms which do not have the in-house technical expertise to devote to problem solving and which lack awareness of technologies available. With continuing Commonwealth support over the next three years, the TTC is expanding its operations from the pilot stage towards a viable long-term program.

Units and Standards of Physical Measurement

The National Standards Commission is responsible for determining the legal units and standards of physical measurement, and the suitability of measuring instruments in use. It advises the Minister for Science and Technology on all aspects of weights and measures.

The existing measurement system is in the process of being updated so that it can meet the requirements of rapidly changing technology. New legislation has been prepared, and recommendations on responsibilities and funding are being put to a forthcoming Ministerial Conference. In order to establish a unified approach to measurement, action has also been taken to bring together the many organisations with an interest in this area.

Information Technology Week

The National Information Technology Week Committee was established in 1979 as an initiative of the Department of Productivity (now Science and Technology) in conjunction with the Australian Computer Society Inc. The Committee conducts an annual Information Technology Week throughout Australia, designed to focus public attention on the present and future uses of information-handling equipment and systems including communications, computers, videotex, word processors and micrographics.

RESEARCH AND DEVELOPMENT

Much of the early history of Australian science was based largely on the individual achievements of a few outstanding scientists.

During and after World War I, governments in various parts of the world took initiatives aimed at encouraging scientific research and applying it to economic growth and national development; Australia was no exception. In 1926 the Council for Scientific and Industrial Research (CSIR) was established by the Commonwealth Government. Initially, it concentrated its efforts on the primary industries, typifying the trend of research in Australia at the time, when most major research initiatives were taken by Government and aimed at the primary industries. The level of research in the universities and industries remained much as before.

With the approach of World War II, however, moves were made to extend scientific support for secondary industry. In the CSIR, Divisions created in the period 1937-40 were to play an important part in the rapid development of Australian industry which occurred under the stimulus of war-time needs.

Expansion of scientific research in general, and industrial research in particular, continued after the war. This expansion extended beyond government into the universities and industry.

Though even today agricultural research absorbs a significant proportion of Australia's research effort, industrial, medical and defence research are now of major importance also. The volume of research in the social sciences and humanities remains small, although in Australia, as elsewhere in recent years, there has been increasing support for the view that adequate weight must be given in governmental policy-making to the social aspects of national proposals.

For details of expenditure and human resources devoted to research, see section below.

Expenditure and Human Resources Devoted to Research and Experimental Development

Project SCORE (Survey and Comparisons of Research Expenditures) provides details of Australian expenditure on research and experimental development activities. It should be noted however that it does not provide comprehensive data on all resources devoted to scientific and technological activities in Australia. Programs not covered by Project SCORE, some of which involve large expenditures, are those which have no research and development component; such programs include many of those aimed at providing scientific or technological services.

The first comprehensive survey on research and experimental development (R & D) was carried out for the financial year 1968-69. There have been four subsequent surveys, the latest being in respect of 1981-82 (1981 calendar year for the Higher Education Sector).

The estimate of gross expenditure on R & D (GERD) carried out in Australia, as derived from the results of the latest survey, is $1,522m. This represents a 44 per cent increase compared with the 1978-79 Survey. At constant (1979-80) prices, GERD has increased by 4 per cent over the same period. The total estimate of human resources devoted to R & D in Australia is 44,535 man-years; this compares with 43,643 man-years for the previous survey.

Survey Methods and Concepts. The Project SCORE surveys measure R & D expenditure and human resources in the natural and social sciences in the major sectors of the Australian economy. For the purposes of Project SCORE, four sectors are recognised: Business Enterprises (public and private business enterprises, excluding those mainly engaged in agriculture, forestry, fishing and hunting); General Government (all State and Commonwealth Government organisations but excluding Local government organisations); Higher Education (Universities and Colleges of Advanced Education), and Private non-Profit (private or semi-public organisations which are not established with the aim of making a profit). The surveys are conducted by means of mailed questionaires and, in order to provide direct comparisons with other OECD countries, follow guidelines described by the OECD for national R & D surveys. The OECD defines R & D as comprising "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications".

For further details concerning survey methods and concepts see the ABS bulletins mentioned below.

Survey Results. A summary of results for 1968-69 is given in Year Book No. 60. Results for the second survey, 1973-74 (1974 calendar year for the Higher Education Sector); the third survey, 1976-77 (1976 calendar year for the Higher Education Sector), and the fourth survey, 1978-79 (1978 calendar year for the Higher Education Sector) are given in Year Books No. 61, 64 and 67 respectively.

Detailed results for the fifth survey, 1981-82 (1981 calendar year for the Higher Education Sector) are contained in the ABS publications: *Research and Experimental Development, Business Enterprises, Australia, 1981-82* (8104.0); *Research and Experimental Development, General Government Organisations, Australia, 1981-82* (8109.0); *Research and Experimental Development, Higher Education Organisations, Australia, 1981* (8111.0); *Research and Experimental Development, All Sector Summary, Australia 1981-82* (8112.0). Results for the Private non-Profit Sector are included in catalogue 8112.0.

A summary of results from the fifth survey is presented below.

Business Enterprise Sector. The estimate of expenditure on R & D carried out in Australia by private and public business enterprises during 1981-82 is $341m at *current* prices. This represents a 39 per cent increase in expenditure compared with 1978-79. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have decreased by 2 per cent over the same period.

The estimate of manpower effort devoted to R & D carried out in Australia by business enterprises during 1981-82 is 7,923 man-years. This represents a decrease of 8 per cent compared with 1978-79.

A summary of Business Enterprise R & D data for 1981-82 is shown in the tables below.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY BUSINESS ENTERPRISES EXPENDITURE AT CURRENT AND CONSTANT PRICES

($m)

	1973-74	*1976-77*	*1978-79*	*1981-82*
AT CURRENT PRICES				
Private enterprises	190.4	160.4	205.8	285.7
Public sector business enterprises	n.a.	42.4	40.0	54.8
Total business enterprises	**n.a.**	**202.8**	**245.8**	**340.5**
AT CONSTANT (AVERAGE 1979-80) PRICES				
Private enterprises	409.8	215.6	226.5	218.4
Public sector business enterprises	n.a.	54.7	44.0	45.4
Total business enterprises	**n.a.**	**270.3**	**270.5**	**263.8**

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY BUSINESS ENTERPRISES (a), BROAD INDICATORS BY INDUSTRY OF ENTERPRISE (b)

Industry of enterprise		*Enterprises that carried out R & D (number)*			*R & D expenditure ($m)*			*Man-years of effort on R & D*		
ASIC code	*Description*	*1976-77*	*1978-79*	*1981-82*	*1976-77*	*1978-79*	*1981-82*	*1976-77*	*1978-79*	*1981-82*
11-15	*Mining (excluding services to mining)*	*22*	*17*	*23*	*7.0*	*9.7*	*22.6*	*446*	*315*	*381*
	Manufacturing									
21	Food, beverages and tobacco	69	84	69	11.6	16.1	13.1	551	545	367
23-24	Textiles, clothing and footwear	27	22	16	2.1	1.4	0.8	106	42	24
25	Wood, wood products and furniture	22	24	19	0.9	1.6	1.7	50	55	43
26	Paper, paper products, printing and publishing	16	14	12	3.3	4.1	5.3	149	144	125
27	Chemicals, petroleum and coal products	115	118	124	27.1	35.2	53.1	1,335	1,381	1,231
28	Non-metallic mineral products	32	27	22	3.8	4.2	4.8	169	154	109
29	Basic metal products	36	35	27	19.0	20.9	27.4	903	776	673
31	Fabricated metal products	74	81	80	4.0	4.5	6.7	228	198	161
32	Transport equipment	44	47	51	14.6	15.6	31.9	761	604	903
334	Photographic, professional and scientific equipment	20	16	25	4.6	6.7	5.1	232	230	160
335	Appliances and electrical equipment	129	120	156	21.1	33.1	37.2	1,209	1,234	899
336	Industrial machinery and equipment	141	128	153	8.2	8.8	14.7	425	388	413
33	Total other machinery and equipment	290	264	334	33.9	48.6	56.9	1,866	1,851	1,472
34	Miscellaneous manufacturing	57	58	65	3.5	5.9	7.3	185	210	180
C	*Total manufacturing*	*782*	*774*	*819*	*123.9*	*158.1*	*209.1*	*6,306*	*5,960*	*5,287*
	Other industries									
F	Wholesale and retail trade	90	112	103	9.2	11.4	11.9	381	390	290
63	Property and business services	182	169	203	11.2	14.2	18.5	532	472	465
8461	Research and scientific institutions	30	29	28	11.7	13.3	21.8	504	460	464
(c)	Other n.e.c.	62	85	70	39.8	39.1	56.6	1,177	1,030	1,034
16,D-I-K-L	*Total other industries*	*364*	*395*	*404*	*71.9*	*78.0*	*108.8*	*2,594*	*2,352*	*2,255*
	Total all industries	**1,168**	**1,186**	**1,246**	**202.8**	**245.8**	**340.5**	**9,343**	**8,626**	**7,923**

(a) Excludes enterprises in ASIC Division A. (b) 1978-79 and 1981-82 data are classified by the 1978 edition of ASIC; 1976-77 data are classified by the 1969 edition of ASIC. If the 1978 edition were used to classify the 1976-77 data shown here only minor differences would occur. (c) ASIC Codes 16, D, E, G-H, 61-62, J-L excluding ASIC class 8461.

Payments and Receipts for Patent Licence Fees and other Technical Know-How—Australian business enterprises have significantly supplemented their R & D efforts by either purchasing or licensing foreign or Australian technology. This activity is largely associated with trans-national firms. The ABS has estimated that Australian enterprises paid $127m in 1981-82 for patent licences and other technical know-how, of which $124m was remitted overseas. In 1981-82 Australian business enterprises received $17m from the sale of patent licences and other technical know-how; $12m of this was received from overseas sources.

PAYMENTS AND RECEIPTS FOR TECHNICAL KNOW-HOW BY BUSINESS ENTERPRISES, PAYMENTS AND RECEIPTS BY INDUSTRY OF ENTERPRISE

($m)

Industry of enterprise		*Payments for technical know-how*			*Receipts for technical know-how*		
ASIC code	*Description*	*1976-77*	*1978-79*	*1981-82*	*1976-77*	*1978-79*	*1981-82*
	Manufacturing—						
21	Food, beverages and tobacco	2.9	4.0	14.9	0.3	0.4	–
23-24	Textiles, clothing and footwear	1.4	1.2	1.4	n.p.	n.p.	–
25	Wood, wood products and furniture	0.1	1.2	1.2	n.p.	n.p.	–
26	Paper, paper products, printing and publishing	0.5			n.p.	0.1	n.p.
27	Chemicals, petroleum and coal products	16.1	27.4	36.3	2.4	3.2	3.6
28	Non-metallic mineral products	4.0	4.4	5.6	0.7	0.9	n.p.
29	Basic metal products	3.1	4.0	7.6	1.2	0.6	2.0
31	Fabricated metal products	1.4	1.4	3.3	0.8	1.3	0.7
32	Transport equipment	7.1	10.1	10.8	0.3	0.5	2.0
334, 335	Photographic, professional and scientific equipment, appliances and electrical equipment	12.4	18.6	11.7	0.6	0.9	1.3
336	Industrial machinery and equipment	3.8	3.3	3.2	0.6	0.2	0.2
33	Total other machinery and equipment	16.2	21.9	14.9	1.2	1.1	1.5
34	Miscellaneous manufacturing	3.1	3.9	3.3	0.5	0.5	0.9
C	*Total manufacturing*	*55.8*	*79.5*	*99.2*	*7.5*	*8.8*	*11.5*
	Other industries	*13.7*	*29.1*	*27.4*	*1.7*	*6.6*	*5.9*
	Total all industries	**69.5**	**108.6**	**126.6**	**9.2**	**15.4**	**17.4**

General Government Sector. The estimate of expenditure on R & D carried out in Australia by organisations in the General Government Sector during 1981-82 is $708m at *current* prices. This represents a 51 per cent increase in expenditure compared with 1978-79. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have increased by 4 per cent over the same period.

The estimate of manpower devoted to R & D carried out in Australia by general government organisations during 1981-82 is 17,683 man-years. This represents an increase of 1 per cent compared with 1978-79.

A summary of General Government R & D data for 1981-82 is shown in the tables below.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS
R & D EXPENDITURE AT CURRENT AND CONSTANT PRICES

($m)

General government organisations	*1976–77*	*1978–79*	*1981–82 (a)*
AT CURRENT PRICES			
Commonwealth	289.5	321.2	514.8
State	126.3	148.7	193.6
Total	**415.8**	**469.9**	**708.3**
AT CONSTANT (AVERAGE 1979–80) PRICES			
Commonwealth	398.9	380.8	403.8
State	164.6	161.7	160.0
Total	**563.6**	**542.5**	**563.8**

(a) Current price estimates for 1981-82 are not strictly comparable with those for earlier years, due to the payment for the first time by some authorities, of their contribution to staff superannuation funds. This discontinuity does not apply to the constant price estimates.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS
R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE

	R & D expenditure ($m)			*Man-years of effort on R & D*		
Socio-economic objective	*1976–77*	*1978–79*	*1981–82*	*1976–77*	*1978–79*	*1981–82*
National security (defence)	*87.6*	*89.2*	*113.2*	*4,232*	*3,826*	*3,625*
Economic development—						
Agriculture	123.7	153.3	235.9	5,872	r5,820	5,678
Forestry and fisheries	20.5	25.1	40.5	860	1,029	1,119
Mining (prospecting)—						
energy sources	4.3	2.3	12.0	201	70	244
other	10.0	10.1	9.1	397	348	236
Mining (extraction)—						
energy sources	0.1	0.8	5.0	—	24	124
other	5.8	5.7	8.7	245	214	228
Manufacturing	34.8	48.2	65.5	1,431	1,548	1,471
Construction	6.9	6.5	7.0	308	268	205
Energy	13.6	20.0	42.7	468	587	731
Transport	11.3	7.2	6.2	410	202	134
Communications	0.2	0.4	0.6	11	15	26
Economic services n.e.c.	17.6	12.0	22.6	825	494	558
Total economic development	*248.9*	*291.6*	*455.9*	*11,028*	*r10,618*	*10,754*
Community welfare—						
Urban and regional planning	3.0	1.3	2.8	128	53	81
Environment	25.4	35.1	36.7	1,163	1,166	876
Health	11.8	16.2	23.1	523	669	826
Education	2.3	1.8	2.7	162	72	99
Welfare	0.7	1.2	1.7	56	58	64
Community services n.e.c.	2.8	2.0	3.6	140	82	85
Total community welfare	*46.0*	*57.7*	*70.5*	*2,171*	*2,099*	*2,031*
Advancement of knowledge—						
Earth, ocean and atmosphere n.e.c.	18.2	8.0	34.3	511	345	542
General advancement of knowledge	15.3	23.5	34.5	594	r535	731
Total advancement of knowledge	*33.4*	*31.4*	*68.7*	*1,105*	*r880*	*1,272*
Total	**415.8**	**469.9**	**708.3**	**18,534**	**r17,424**	**17,683**

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS
R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE

	R & D expenditure ($m)			*Man-years of effort on R & D*		
Field of science	*1976-77*	*1978-79*	*1981-82*	*1976-77*	*1978-79*	*1981-82*
Natural sciences—						
Physical sciences	29.0	35.9	39.9	1,248	1,072	915
Chemical sciences	19.3	21.3	25.5	711	683	562
Biological sciences	56.6	43.6	76.1	2,043	1,539	1,657
Earth sciences	35.3	41.4	73.8	1,515	1,332	1,520
Engineering and applied sciences	127.0	142.1	205.2	5,679	5,478	5,587
Agricultural sciences	122.4	163.3	252.3	5,948	6,333	6,271
Medical sciences	7.9	9.4	13.2	393	420	503
Total natural sciences	*397.6*	*457.0*	*686.1*	*17,536*	*16,859*	*17,015*
Social sciences and humanities—						
Economics	9.0	3.0	6.7	466	157	208
Education	2.5	2.1	2.8	172	82	102
Management	0.9	1.7	0.4	4.2	65	13
Political science	0.1	0.1	0.1	3	3	2
Sociology	1.3	1.4	1.8	76	60	61
Information science	1.1	1.6	5.0	52	68	122
Other social sciences and humanities	3.4	3.1	5.4	185	130	158
Total social sciences and humanities	*18.1*	*12.9*	*22.2*	*996*	*564*	*667*
Total	**415.8**	**469.9**	**708.3**	**18,534**	**17,424**	**17,683**

Higher Education Sector. The estimate of expenditure on R & D carried out in Australia by higher education organisations during 1981 is $453m at *current* prices. This represents a 39 per cent increase in expenditure compared with 1978. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have increased by 7 per cent over the same period.

The estimate of manpower effort devoted to R & D carried out in Australia by higher education organisations during 1981 is 18,241 years. This represents an increase of 7 per cent compared with 1981.

A summary of Higher Education R & D data for 1981 is shown in the tables below.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS
R & D EXPENDITURE AT CURRENT AND CONSTANT PRICES
($m)

Higher education organisations	*1976*	*1978*	*1981*
AT CURRENT PRICES			
Universities	239.9	318.8	443.5
CAE's	4.2	6.7	9.0
Total	**244.1**	**325.5**	**452.5**
AT CONSTANT (AVERAGE 1979-80) PRICES			
Universities	317.9	354.8	379.3
CAE's	5.7	7.1	7.8
Total	**323.5**	**361.9**	**387.2**

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS
R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE

	R & D expenditure ($m)							
	Excluding university overheads(a)			*Including university overheads(a)*		*Man-years of effort on R & D*		
Socio-economic objective	*1976*	*1978*	*1981*	*1978*	*1981*	*1976*	*1978*	*1981*
National security (defence)	*0.1*	*0.2*	*0.6*	*0.3*	*0.7*	*9*	*r15*	*19*
Economic development—								
Agriculture	11.2	19.2	26.5	25.8	35.5	991	1,500	1,554
Forestry and fisheries	1.2	1.4	3.2	2.0	4.3	134	117	167
Mining (prospecting)—								
energy sources	0.2	0.2	1.4	0.3	1.8	24	17	64
other	0.4	0.7	1.4	1.1	1.8	47	62	67
Mining (extraction)—								
energy sources	0.2	0.2	0.7	0.3	1.0	18	18	44
other	0.5	1.3	1.9	1.8	2.4	44	96	104
Manufacturing	5.5	8.5	9.9	11.2	13.0	488	676	583
Construction	1.2	1.6	2.1	2.0	2.7	109	102	107
Energy	3.8	7.1	17.0	9.0	21.7	290	440	764
Transport	1.3	1.8	2.0	2.3	2.6	104	138	98
Communications	0.9	1.7	2.5	2.2	3.2	90	127	143
Economic services n.e.c.	6.4	9.6	16.8	12.2	21.0	461	644	677
Total economic development	*32.8*	*53.3*	*85.4*	*70.1*	*110.9*	*2,800*	*3,936*	*4,372*
Community welfare—								
Urban and regional planning	1.4	1.8	3.0	2.5	4.0	123	157	161
Environment	3.1	3.6	4.3	4.7	5.7	258	248	256
Health	20.5	47.4	68.2	56.9	87.3	1,412	2,484	3,345
Education	5.4	9.0	13.4	11.4	18.1	494	602	923
Welfare	1.0	2.6	4.4	3.3	5.7	73	167	202
Community services n.e.c.	3.0	6.4	8.7	8.1	11.3	184	398	427
Total community welfare	*34.4*	*70.8*	*102.0*	*86.9*	*132.1*	*2,544*	*4,057*	*5,314*

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS
R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE—*continued*

	R & D expenditure ($m)							
	Excluding university overheads(a)			*Including university overheads(a)*		*Man-years of effort on R & D*		
Socio-economic objective	*1976*	*1978*	*1981*	*1978*	*1981*	*1976*	*1978*	*1981*
Advancement of knowledge—								
Earth, ocean and atmosphere n.e.c.	8.2	12.9	20.1	17.6	26.3	700	1,011	1,019
General advancement of knowledge	108.9	116.3	135.9	150.7	182.4	9,233	8,030	7,516
Total advancement of knowledge	*117.1*	*129.3*	*156.0*	*168.2*	*208.7*	*9,933*	*9,040*	*8,535*
Total	**184.3**	**253.6**	**344.0**	**325.5**	**452.5**	**15,290**	**17,047**	**18,241**
Universities' contribution	180.1	246.9	335.1	318.8	443.5	14,929	16,521	17,699
CAEs' contribution	4.2	6.7	9.0	6.7	9.0	361	526	542

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS
R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE

	R & D expenditure ($m)							
	Excluding university overheads(a)			*Including university overheads(a)*		*Man-years of effort on R & D*		
Field of science	*1976*	*1978*	*1981*	*1978*	*1981*	*1976*	*1978*	*1981*
Natural sciences—								
Physical sciences	21.4	27.6	38.4	34.4	49.1	1,485	1,638	1,672
Chemcial sciences	14.4	18.3	22.1	23.9	29.1	1,136	1,261	1,143
Biological sciences	29.6	43.4	53.9	56.5	73.2	2,518	2,976	3,089
Earth sciences	9.0	10.3	14.4	13.6	18.8	748	750	648
Engineering and applied sciences	19.6	28.0	40.0	36.2	51.4	1,786	2,073	2,145
Agricultural sciences	11.3	18.1	25.2	24.7	33.7	1,096	1,380	1,428
Medical sciences	25.9	38.6	47.3	45.2	59.7	1,692	1,802	2,274
Total natural sciences	*131.2*	*184.3*	*241.3*	*234.5*	*315.1*	*10,461*	*11,879*	*12,399*
Social sciences and humanities—								
Economics	6.4	10.0	12.3	12.1	15.2	463	507	462
Education	6.8	7.9	11.7	11.0	16.2	681	790	891
Management	0.7	0.8	3.1	1.0	3.7	40	61	120
Political science	1.5	3.7	5.6	4.8	7.4	121	259	297
Sociology	2.1	3.5	5.0	4.7	6.7	215	274	257
Other social sciences and humanities	35.6	43.4	65.1	57.4	88.3	3,308	3,280	3,813
Total social sciences and humanities	*53.1*	*69.3*	*102.7*	*91.0*	*137.4*	*4,828*	*5,169*	*5,840*
Total	**184.3**	**253.6**	**344.0**	**325.5**	**452.5**	**15,290**	**17,047**	**18,241**

(a) University overhead R & D expenditure is an estimate of the R & D component of capital and current expenditures associated with academic services and general university services. See catalogue 8111.0 for further details.

Private Non-Profit Sector. The estimate of expenditure on R & D carried out in Australia by Private non-Profit organisations during 1981-82 was $21m at *current* prices. This represents a 66 per cent increase in expenditure compared with 1978-79. At *constant* (1979-80) prices, R & D expenditure is estimated to have increased by 23 per cent over the same period.

The manpower effort devoted to R & D carried out in Australia by Private non-Profit organisations during 1981-82 was 688 man-years. This represents an increase of 26 per cent compared with 1978-79.

A summary of Private non-Profit data for 1981-82 is shown in the tables below.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY PRIVATE NON-PROFIT ORGANISATIONS, R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE

	R & D expenditure ($'000)			*Man-years of effort on R & D*		
Socio-economic objective	*1976–77*	*1978–79*	*1981–82*	*1976–77*	*1978–79*	*1981–82*
National security (defence)	–	–	–	–	–	–
Economic development—						
Agriculture	95	30	36	6	1	3
Forestry and fisheries	–	75	–	–	1	–
Mining (prospecting)—						
energy sources	–	–	–	–	–	–
other	–	–	–	–	–	–
Mining (extraction)—						
energy sources	–	–	–	–	–	–
other	–	–	–	–	–	–
Manufacturing	13	–	–	1	–	–
Construction	–	–	–	–	–	–
Energy	16	10	3	3	1	1
Transport	35	68	196	2	3	12
Communications	–	–	–	–	–	–
Economic services n.e.c.	70	169	512	4	6	18
Total economic development	*229*	*352*	*747*	*16*	*13*	*34*
Community welfare—						
Urban and regional planning	21	35	–	1	4	–
Environment	2	9	–	2	–	–
Health	8,863	9,979	17,758	476	448	563
Education	990	1,554	1,739	59	65	63
Welfare	44	61	420	4	4	22
Community services n.e.c.	116	2	35	5	1	1
Total community welfare	*10,036*	*11,641*	*19,952*	*547*	*522*	*649*
Advancement of knowledge—						
Earth, ocean and atmosphere n.e.c.	6	150	–	–	3	–
General advancement of knowledge	442	422	210	16	9	6
Total advancement of knowledge	*448*	*572*	*210*	*16*	*12*	*6*
Total	**10,712**	**12,566**	**20,909**	**579**	**546**	**688**
Total Expenditure at constant (1979-80) prices ($m)	13.8	13.7	16.9			

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY PRIVATE NON-PROFIT ORGANISATIONS, R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE

	R & D expenditure ($'000)			*Man-years of effort on R & D*		
Field of science	*1976–77*	*1978–79*	*1981–82*	*1976–77*	*1978–79*	*1981–82*
Natural sciences—						
Physical sciences	76	105	183	4	2	6
Chemical sciences	118	112	67	6	2	2
Biological sciences	1,327	2,277	1,668	68	83	48
Earth sciences	11	21	3	1	–	1
Engineering and applied sciences	71	187	220	5	6	14
Agricultural sciences	2	36	36	–	2	3
Medical sciences	7,465	7,898	15,962	397	370	510
Total natural sciences	*9,070*	*10,636*	*18,139*	*481*	*465*	*583*
Social sciences and humanities—						
Economics	24	134	413	1	3	15
Education	1,000	1,557	1,743	60	65	58
Management	5	–	5	–	–	–
Political science	–	–	–	–	–	–
Sociology	121	91	73	11	8	4
Information science	–	9	40	–	1	1
Other social sciences and humanities	492	138	497	25	5	28
Total social sciences and humanities	*1,642*	*1,930*	*2,770*	*97*	*81*	105
Total	**10,712**	**12,566**	**20,909**	**579**	**546**	**688**

Major Government Research Agencies

Information on the science and technology activities and expenditures of Commonwealth Government Ministries and their agencies is provided in the *Science and Technology Statement 1982-83.* Total science and technology expenditures projected by the Commonwealth Government in 1982-83 are shown as $1,583m, of which $891m was allocated to research and experimental development.

Commonwealth Scientific and Industrial Research Organization (CSIRO)

The CSIRO is the largest scientific research organization in Australia. It has a total staff of some 7,500 people located in more than 100 laboratories and field stations throughout Australia. About one-third of the staff are scientists.

It is a statutory body established by the *Science and Industry Research Act 1949.* Under the Act, CSIRO replaced the former Council for Scientific and Industrial Research, established in 1926. The Organization was restructured by amendments to the Act in 1978.

Briefly, the functions of CSIRO are:

- conduct of scientific research and application of the results;
- research training and funding;
- maintenance of measurement standards;
- publication and dissemination of scientific information.

When the Organization was first set up, its research centred on solving the problems then facing agriculture and industry. Today, its research extends not only to those areas but into others affecting every Australian—the environment, human nutrition, conservation and urban planning.

CSIRO is governed by an Executive comprising three full-time members, including the Chairman, and five part-time Members. An Advisory Council and advisory committees in each State and the Northern Territory, have members appointed to represent the range of interests in the Australian community.

The CSIRO's research is carried out in some thirty-nine divisions and several smaller units. The divisions and units are grouped into the following five Institutes.

Institute of Animal and Food Sciences: Divisions of Animal Health, Animal Production, Fisheries Research, Food Research, Human Nutrition, Tropical Animal Science, Molecular and Cellular Biology Unit, Wheat Research Unit.

Institute of Biological Resources: Divisions of Entomology, Forest Research, Horticultural Research, Centre for Irrigation Research, Water and Land Resources, Plant Industry, Soils, Tropical Crops and Pastures, Wildlife Research, Rangelands Research Unit, Laboratory for Rural Research

Institute of Energy and Earth Resources: Divisions of Applied Geomechanics, Energy Chemistry, Energy Technology, Fossil Fuels, Ground Water Research, Mineral Chemistry, Mineral Engineering, Mineral Physics, Mineralogy, Physical Technology Unit.

Institute of Industrial Technology: Divisions of Applied Organic Chemistry, Building Research, Chemical and Wood Technology, Manufacuring Technology, Protein Chemistry, Textile Industry, Textile Physics.

Institute of Physical Sciences: Divisions of Applied Physics, Atmospheric Physics, Chemical Physics, Computing Research, Environmental Mechanics, Materials Science, Mathematics and Statistics, Oceanography, Radiophysics, Australian Numerical Meteorology Research Centre.

A Bureau of Scientific Services is responsible for facilitating and promoting the transfer and utilization of technology and scientific and technical information for the benefit of Australian science, industry and the community at large, and undertaking development assistance projects with other nations.

The main role of CSIRO is to plan and execute a comprehensive program of general scientific research on behalf of the Commonwealth, except in the areas of defence, nuclear energy and clinical medicine. With these main exceptions, however, the research work of CSIRO includes all fields of the physical and biological sciences, and their applications.

The types of research undertaken range from fundamental studies through to experimental development, with the main concentration being on strategic research undertaken in the national interest.

Areas of research designated as having high priority for expansion in the 1980s are:

- Biotechnology;
- Water and soils;
- Oceanography;
- Energy;
- Plant pathology;
- Manufacturing industry.

The CSIRO budget for 1983-84 is an estimated $332 million, most of which is provided directly by the Commonwealth Government. Of this, $43 million is appropriated to Commonwealth departments (e.g. Transport and Construction) on behalf of CSIRO for capital expenditure. Some $30 million is contributed by trust funds concerned with the wool, meat, wheat, dairying, fishing and dried fruit industries, by individual companies, by Australian and overseas government instrumentalities, and by private foundations. The trust funds constitute about half of these contributory funds and are derived mainly from industry levies but there is also a Commonwealth Government component.

Australian Government Analytical Laboratories (AGAL)

See entry on page 645.

Antarctic Division, Department of Science and Technology

Australia has been active in research and exploration in the Antarctic region since early this century, but the overall effort has expanded appreciably since the 1940s when the Government established the Australian National Antarctic Research Expeditions (ANARE) co-ordinated by the Antarctic Division of the Department of Science and Technology.

The Antarctic Division formulates and develops Australia's policies on Antarctic matters consistent with Government objectives; administers the Australian Antarctic Territory and the sub-Antarctic islands under Australian jurisdiction; organises and provides logistic support for the ANARE, including establishment and maintenance of the Antarctic stations at Casey, Davis and Mawson and the sub-Antarctic station at Macquarie Island; and plans and conducts scientific programs approved by the Antarctic Research Policy Advisory Committee (ARPAC).

The Australian Antarctic scientific program encompasses research in marine and terrestrial biology, oceanography, earth sciences, glaciology, cosmic ray and upper atmosphere physics, meteorology, bathymetry, medical research, surveying and mapping. Each year, the Antarctic Division, universities and private and public research organisations are invited to submit research proposals to ARPAC.

Australia is a signatory to the Antarctic Treaty, and many of its scientific activities in Antarctica are undertaken in collaboration with other signatory countries.

Bureau of Meteorology

See entry on page 645.

Australian Institute of Marine Science (AIMS)

The AIMS is located on a 190 hectare site within a national park at Cape Ferguson, 50 kilometres south of Townsville in North Queensland. Comprehensive facilities include laboratories, lecture theatre, library, computer centre, administrative and other support services, a harbour and an ocean-going research vessel.

The Institute's main function is to undertake research; in this regard its activities focus on contributing to an understanding of the tropical marine environment and its associated living communities. Attention is currently concentrated on coral reef and mangrove ecosystems. A multidisciplinary approach is taken to investigate the character of these systems and the manner in which their productivity, diversity, stability and other essential attributes are affected by environment, adaptation and ecological interactions. A significant proportion of the Institute's investigations is undertaken by external collaboration, with an active visiting investigator program being an important means of achieving that objective. The interests of the research staff are necessarily diverse and include physical oceanography, marine chemistry and various aspects of biology, from biochemistry to trophodynamic ecology.

Defence Science and Technology Organisation (DSTO)

The DSTO, part of the Department of Defence, conducts a significant amount of research and development, mainly in engineering and the physical sciences. Current expenditure is about $144 million per year. Further details on the work of the organisation, and its ten research and testing establishments are found in Chapter 4, Defence.

Australian Atomic Energy Commission (AAEC)

For information on the AAEC see Chapter 18, Energy.

Engineering Division, Department of Housing and Construction

To support its operations as the major design and construction authority for the Commonwealth, the Department of Housing and Construction carries out applied research and laboratory testing and provides a comprehensive range of technical services. In many cases, these services directly or indirectly benefit the needs of private industry and the public.

Research and special testing is conducted mainly by the Engineering Division at establishments such as the Experimental Building Station in Sydney, which specialises in building and building components, and the Central Investigation and Research Laboratory in Melbourne, which specialises in engineering materials and products.

Ionospheric Prediction Service

See entry on page 646.

Telecom Australia Research Laboratories

Telecom Australia maintains significant facilities and a staff of approximately 500 for the performance of research and development in telecommunications science and technology.

The primary objective of Telecom's research and development is to evaluate world advances in telecommunications services and systems so that it can select those best suited to the Australian environment. It also applies its research and development facilities to the solution of technical problems arising in the operation of the Australian telecommunications network. Its research and development is co-ordinated with that of industry and academia involved in telecommunications; Telecom supports their efforts with R & D contracts and grants made through the Australian Computer Research Board and the Radio Research Board.

Research in Universities and Colleges of Advanced Education

The Commonwealth Government is the primary source of funding for research activities in universities. Over half of Commonwealth funding is provided under the *States Grants (Tertiary Education Assistance) Act* which is administered by the Commonwealth Tertiary Education Commission. The general recurrent grants received by universities incorporate funding for research purposes. In addition, special research grants are available for young members of academic staff to develop their research activities, the training of research workers and post-doctoral fellowships.

In 1981 ten Commonwealth Special Research Centres were established in universities under the Commonwealth Program for the Promotion of Excellence in Research. The Government is providing $16m for the Centres over the 1982-84 triennium.

Colleges of advanced education do not receive special funding for research purposes under the *States Grants (Tertiary Education Assistance) Act*, however, individual members of academic staff are encouraged to seek support for applied research.

The two principal grants schemes through which supplementary funds are made available for research in universities are the Australian Research Grants Scheme (ARGS), administered by the Queen Elizabeth II Fellowships and Australian Research Grants Committee (QEFARGC), and the scheme administered by the National Health and Medical Research Council (NH&MRC). For both schemes, the principal criterion for awards is the scientific excellence of the research project. In the case of NH&MRC, the quality of scholarship is also an important criterion. NH&MRC applications are judged by expert advisory committees composed of practising scientists, and recommendations are made to the Minister for Health. ARGS applications are assessed by external assessors whose reports are considered by QEFARGC before recommendation to the Minister for Science and Technology. The Commonwealth Department of Health administers the Health Service Research and Development Grant program which provides grants to researchers in educational and health institutions and to independent researchers. The Department receives advice from the Health Services Research and Development Grants Advisory Committee.

Fellowships such as the Queen Elizabeth II and Queen's Fellowships while providing some additional funds, are significant more for the prestige they carry than for their contribution to overall funding levels. Their goal is to provide special opportunities to the very best of the younger researchers.

Research Organisations Associated with Education Insitutions

In recent years there has been an increase in outside support for research in universities and colleges of advanced education. One source has been research contracts for specific projects from government and industry.

A number of the tertiary education institutions have established independent, commercial companies to promote and manage research and consultancy services to industry, commerce, government and the community. Examples are: Unisearch Ltd, associated with the University of New South Wales; ANUTECH Pty Ltd, associated with the Australian National University; Wait-Aid Ltd, associated with the Western Australian Institute of Technology; Technisearch Ltd, associated with the Royal Melbourne Institute of Technology; SAARD, associated with the Swinburne Institute of Technology; Techsearch Inc., associated with the South Australian Institute of Technology; and The University of Newcastle Research Association.

These organisations play an important role in promoting communication between the Higher Education and other sectors. They undertake investigational and research projects and provide consultancy, technical information and testing services in a range of fields including engineering, management, marketing and the social sciences.

Social Science and Humanities Research

Research in the social sciences and humanities is undertaken primarily in universities ($137 million out of an Australian total of $162 million for 1981-82). Support for this research comes both from general funds, provided to the universities and from specific granting schemes such as the ARGS.

The bulk of the social science and humanities research carried out within Commonwealth Government agencies is performed as part of the general activities of various departments. In addition, several other Commonwealth Government agencies have an active interest in either sponsoring or undertaking such research. These include the Australian Institute of Aboriginal Studies, the Australian Institute of Criminology, the Bureau of Industry Economics, the Bureau of Agricultural Economics, the Bureau of Transport Economics, the Bureau of Labour Market Research, the Institute of Family Studies and the Australian Institute of Multicultural Affairs.

Agencies of the various State governments undertake research relevant to their own activities. A number of research organisations in the transport sphere are funded from both Commonwealth and State sources. The Australian Road Research Board and the Australian Railway Research and Development Organisation are active in social science research.

Exchange of ideas and information on the social sciences is promoted through a number of professional and learned bodies, of which the Australian and New Zealand Association for the Advancement of Science and the Academy of Social Sciences in Australia are the most broadly based. In addition to encouraging the advancement of the social sciences, the Academy sponsors and organises research, subsidies publications and acts as a consultant and advisor in the social sciences field.

Non-government bodies which undertake or promote research in specific fields of the social sciences include the Australian Institute of International Affairs, the Australian Institute of Urban Studies, and the Australian Institute of Political Science.

International Activities

International Organisations

Australia participates in a range of programs and projects of United Nations and other organisations (UNESCO, OECD, United Nations Economic Program, World Meteorological Organisation, World Intellectual Property Organisation and International Atomic Energy Association) and in the activities of both governmental and non-governmental scientific organisations. To facilitate scientific liaison and representation, the Commonwealth Government has scientific representation at some overseas posts (Tokyo, Paris (OECD)). In November 1982, Australia was elected a member of the Intergovernmental Oceanographic Commission Executive Council. Australia also participates in regional collaborative programs organised by the Economic and Social Commission for Asia and the Pacific, the Association for Science Co-operation in Asia, the Commonwealth Science Council and the Pacific Science Association. Technical assistance is provided for countries in the region under both multilateral and bilateral arrangements.

Participation in international non-governmental scientific bodies is arranged through learned and professional bodies. For example, the Australian Academy of Science provides representation to the International Council of Scientific Unions (ICSU) and a number of its affiliated bodies.

Antarctic Treaty and Conservation of Antarctic Marine Living Resources

In 1957, as part of the International Geophysical Year (IGY), twelve nations including Australia co-operated in research programs in Antarctica. The outstanding co-operation between nations in the Antarctic during the IGY resulted in discussions which culminated in the establishment of the Antarctic Treaty. It was signed on 1 December 1959 by the nations that had been active in Antarctica during the IGY, including all of those with territorial claims. The original signatories were Argentina, Australia, Chile, France, New Zealand, Norway, UK (all claimants), Belgium, Japan, South Africa, the USSR and the USA (all non-claimants). The Treaty, which was ratified by Australia in 1961, among other things reserves the Antarctic area south of 60°S latitude for peaceful purposes, provides for international co-operation in scientific investigations and research, and preserves for the duration of the Treaty the legal positions of claimants and non-claimants with regard to territorial sovereignty, rights and claims.

The Treaty makes provision for other states to accede to it. Sixteen nations have acceded: Poland, German Democratic Republic, Czechoslovakia, Romania, Denmark, the Netherlands, the Federal Republic of Germany, Papua New Guinea, Peru, Italy, Uruguay, Bulgaria, China, Brazil, India and Spain. Poland and the Federal Republic of Germany have been accorded consultative status.

Australia hosted the first Antarctic Treaty Consultative Meeting in July 1961 and the twelfth in September 1983. Observers from the contracting parties to the Treaty, which are not also consultative parties, were invited for the first time to the twelfth meeting held in Canberra in September 1983.

The consultative parties have formulated a number of measures to protect Antarctica's fragile ecosystem. The environment of the Australian Antarctic Territory is protected by the *Antarctic Treaty (Environment Protection) Act 1980,* and by recommendations of Treaty meetings that the Australian Government has adopted.

Australia is also participating in meetings to negotiate a regime to regulate exploration for and exploitation of Antarctic minerals. The first meeting was held in Wellington, New Zealand, in June 1982. The most recent meeting was in Bonn, West Germany, in July 1983.

At a diplomatic conference in Canberra in May 1980 the Treaty consultative partners adopted the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). The Convention establishes the basis for a conservation and management regime for the entire ecosystem of the area south of the Antarctic Convergence (about 45° to 56°S). The headquarters of the CCAMLR Commission, established under the Convention, is in Hobart. Fifteen nations and the European Community have signed the Convention which is open to accession by any country. Australia was elected to provide the first Chairman of the Commission, and an Australian has been appointed as first Executive Secretary.

Studentships and Fellowships

Australia has assisted other countries, principally in the Asian and Pacific regions, by training their nationals. Large numbers of such students, mainly seeking first qualifications at tertiary level, have been accommodated under schemes such as the Colombo Plan. There are also arrangements under which established scientists from overseas are assisted to undertake study and research in Australia.

Bilateral Arrangements

Various bilateral arrangements at both government and non-government levels have contributed to the development and maintenance of co-operation in science and technology between Australian institutions and scientists and those in other countries. Formal bilateral agreements, administered by the Department of Science and Technology, reflect two major aspects: the importance of a regular flow of scientific and technological information into Australia; and the significance of Australian science, technology and industrial property systems in assisting the economic growth of less developed countries. These agreements, solely devoted to scientific and technological co-operation, have been entered into with the USA (1968), India (1975), the USSR (1975), the Federal Republic of Germany (1976), Japan (1980), the Peoples Republic of China (1980) and Mexico (1981). Support is provided for both individual visits and specialist seminars over the whole range of civil science. Where opportunities exist, other co-operative projects which depend on special facilities are supported.

A scientific exchange program between the Australian Academy of Science and the Academia Sinica of Beijing was initiated in 1977. Scientific fields considered most promising are plant physiology, entomology, earth science and radio astronomy.

Visits to Japan and China by Australian scientists can be supported by the Australia/Japan Foundation and the Australia/China Council respectively.

Meteorology

Australia is a member of the World Meteorological Organisation (WMO), with the Director of Meteorology being Australia's Permanent Representative on WMO.

Optical Astronomy

The Anglo-Australian Telescope Board was established under the provisions of an international agreement between Australia and the United Kingdom and draws its funds in equal shares from each country. It operates the 3.9 metre Anglo-Australian Telescope at Siding Spring Mountain near Coonabarabran in New South Wales; the Telescope is amoung the largest in the world and came into full scientific operation during 1975. Its technical excellence and the scientific work which it has made possible have made it widely recognised as one of the world's foremost optical telescopes.

Space

An agreement by the Governments of Australia and the USA to co-operate in the establishment and operation in Australia of space vehicle tracking stations was signed in 1960 and has been renewed since then at ten-year intervals. The agencies for the Australian and US Governments are the Department of Science and Technology and the National Aeronautics and Space Administration (NASA) respectively.

As part of the world-wide network supporting NASA's space program, the Australian stations track spacecraft in their orbits around the earth or on their journeys into space, receive telemetred data from the spacecraft, and relay radio commands controlling the spacecraft.

The Department of Science and Technology is responsible for managing, staffing and operating the tracking stations on behalf of NASA. The stations are located at Orroral Valley and Tidbinbilla in the Australian Capital Territory and at Yarragadee in Western Australia. A communications system links them with control centres in the US.

Expenditure by NASA on its tracking station operations in Australia in 1982-83 was about $12 million.

An agreement was signed in 1979 between the Commonwealth Government and the European Space Agency (ESA) for the establishment and operation of a space vehicle tracking facility in Australia in support of ESA programs. The facility is located at the site of the Overseas Telecommunications Commission (Aust.) earth Station at Carnarvon, W.A. Arrangements have been made with ESA for CSIRO's Parks radio telescope to be used to support ESA's Giotto spacecraft which will try to intercept Halley's Comet in March 1986.

Seismology

A comprehensive seismic station at Alice Springs (Joint Geological and Geophysical Research Station) is operated jointly under an agreement between the Governments of Australia and the United States of America. The agencies for the Governments are, respectively, the Department of Science and Technology and the United States Air Force.

The station provides continuous seismic records to assist the United States Government in the identification of underground nuclear explosions and, through the Department of Science and Technology, provides seismic records to the Bureau of Mineral Resources. Records are also available, through the Department of Science and Technology, to Australian scientists for research in earth physics.

Defence

In the field of defence science, Australia collaborates with other countries through a variety of arrangements at intergovernmental level. Futher information including defence science technology arrangements is given in Chapter 4, Defence.

Transport

Through a variety of arrangements at intergovernmental level, Australia is represented at Federal and State levels in a number of international organisations concerned with transport research. Further information is given in Chapter 20, Transport and Communications.

Other

At the non-governmental level, formal arrangements for scientific co-operation with counterpart institutions in other countries have been concluded by a number of Australian bodies. For example, an arrangement covering co-operation in astronomy exists between the University of Sydney and Cornell University (USA), while over a broader area the Australian National University has an arrangement with the University of Moscow which includes exchanges in the scientific fields.

Additional information

Additional information on topics presented in this chapter may be found in the annual reports of the organisations mentioned, particularly the Department of Science and Technology, the CSIRO and its divisions, the Australian Atomic Energy Commission and the Department of Defence and in the annual *Science and Technology Statements*. Statistical information for the years 1968-69, 1973-74 and 1976-77 may be found in the reports published by the Department of Science and Technology on Project SCORE. Statistical information relating to 1978-79 and to 1981-82 may be obtained from the Australian Bureau of Statistics (ABS). See paragraphs on expenditure and human resources devoted to Research and Experimental Development (in this chapter) for details of ABS publications.

Recent information on manufacturing industry research and development is contained in ASTEC's report on *Industrial Research and Development: Proposals for Additional Incentives*, June 1980 and the report of the Industries Assistance Commission, *Inquiry into Certain Budgetary Assistance to Industry*, March 1982. In addition, information is contained in the annual reports of the Australian Industrial Research and Development Incentives Board. For reports published prior to 1980 see previous editions of the Year Book.

CHAPTER 26

NATIONAL ESTATE, CULTURE, RECREATION AND TRAVEL

THE NATIONAL ESTATE

The Australian Heritage Commission

The Australian Heritage Commission, established under the *Australian Heritage Commission Act* 1975, consists of a part-time independent Chairman and six part-time Commissioners with various skills and interests in the natural and cultural environment. Research and secretariat services for the Commission are provided by a staff of professional and clerical officers permanently located in Canberra.

The Commission's responsibilities are to advise the Minister for Home Affairs and Environment on all matters related to the National Estate; to prepare and maintain a Register of National Estate places; to develop policies and programs for education, research, professional training and public interest and understanding in fields related to the National Estate; and to administer any gifts and bequests made to the Commission.

To date approximately 7,300 places have been entered in the Register of the National Estate. They are places with National Estate significance, relating to the natural environment and to Aboriginal or European culture. The first 6,600 sites listed are described in the major publication *The Heritage of Australia—The Illustrated Register of the National Estate*, published in conjunction with Macmillan Company of Australia in September 1981.

Australian National Trusts

The Australian National Trusts were founded to further the conservation of lands, buildings, works and articles which are of national importance because of educational, aesthetic, historic, architectural, artistic, scientific, cultural or other special interest.

The first National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then, National Trusts have been formed in each of the other States, the Northern Territory and the Australian Capital Territory.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout Australia is approximately 80,000. The Trusts are financed by members' subscriptions and donations from individuals and commercial and industrial organisations; the proceeds of charges for entry to Trust properties; and the fund-raising activities of members, including inspections of historic buildings and towns, archaeological sites and places of natural beauty. Each State National Trust receives financial support from the Commonwealth Government in the form of an administrative grant-in-aid and from State Governments.

The Australian Council of National Trusts was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at federal and international level. Donations to the Council and Trusts are tax deductible and the Commonwealth Government further supports the Council through an annual grant for administrative purposes.

Since 1973, the National Trusts have received Commonwealth grants under the National Estates program for capital projects, mainly for the restoration of buildings and conservation studies. They have also supervised projects of other organisations financed under the program.

The number of properties owned or controlled by the Trusts approaches 300. These include houses, nature reserves, gardens, two paddle steamers and an iron barque, an historic hamlet, and buildings which were formerly a telegraph station, a stock exchange, a powder magazine, a market, an inn, a police station, a court house, a gaol and a joss house.

The Trusts have established registers of more than 18,000 places including buildings, urban areas, landscapes and industrial sites which they consider should be conserved as part of the national estate.

In March 1983 the Australian Council of National Trusts in collaboration with Scottish Heritage USA and The National Trust for Scotland hosted the Third International Conference of National Trusts which attracted delegates from all over the world.

Historic Memorials Committee

The Historic Memorials Committee was established in 1911 for the purposes of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits or other representations of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, Chief Justices of the High Court of Australia and other distinguished Australians. In addition, the Committee has commissioned paintings or other representations recording special events connected with the Commonwealth Parliament and, more recently, the High Court of Australia.

The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice President of the Executive Council, the Leader of the Opposition in the House of Representatives, and the Leader of the Opposition in the Senate. The Committee is advised on commissioning of portraits by the Visual Arts Board of the Australia Council. The Secretary to the Committee is provided by the Department of Home Affairs and Environment, Canberra.

Environment

In Commonwealth legislation, environment is defined as including 'all aspects of the surroundings of man, whether affecting him as an individual or in his social groupings'. Thus the environmental responsibilities of the Government relate to a broad range of activities including control of air and water pollution, soil conservation, wildlife protection, establishment of national parks, recycling and energy conservation. These responsibilities are shared among many agencies of government; however a special focus is provided by the Ministry of Home Affairs and Environment.

The Commonwealth is responsible for the environment of the Territories and in Commonwealth places, for the environmental impacts of its agencies operating in the States and for contributing to international environmental activities, including the application of international conventions to which Australia is a signatory. The Commonwealth also plays a major role in environmental research and information exchange, and generally endeavours to co-ordinate environment protection and conservation activities to achieve maximum benefit for the nation.

The main avenue for national collaboration on environmental matters is through two Ministerial Councils: the Australian Environment Council and the Council of Nature Conservation Ministers and their expert committees. Other Councils, such as those concerned with minerals and energy, agriculture, water resources and transport, also facilitate national co-ordination of activities which relate to the environment.

The Commonwealth and each State has formal procedures for assessing the environmental implications of development proposals which could have significant environmental effects, and for taking these effects into account in the actions and decisions of the respective government. The procedures generally include provisions for the preparation of environmental impact statements by proponents, public comment on the statements and assessment by government.

A National Conservation Strategy is currently being developed by the Commonwealth in collaboration with the States, non-government conservation groups, industry and the community. The objective is to achieve a balance between sustainable development and conservation of Australian living resources and supporting ecosystems. The Strategy is considering the status of living resources, threats to these resources and actions which may be necessary to achieve their long-term sustainable use.

A National Tree Program, which commenced in mid-1982, aims to conserve, regenerate and establish trees, and generally to promote understanding of the value of trees. Tree loss has reached critical proportions in many areas of Australia, and it is often associated with problems of land degradation.

The Australian Biological Resources Study (ABRS) was established in 1973 to stimulate taxonomic and ecological studies of Australian flora and fauna. ABRS responsibilities include advice on national taxonomic collections and establishment and maintenance of a national taxonomic data bank. Much of the work of the study is done in State museums, botanic gardens and herbaria which were established during the last century. CSIRO also carries out important research relating to flora and fauna.

Current major projects of ABRS include preparation of a 50 volume *Flora of Australia*, compilation of the *Zoological Catalogue of Australia* and establishment of data base exchange systems for museums and herbaria.

The Australian National Parks and Wildlife Service has responsibility at Commonwealth level for management of national parks and wildlife, conduct of ecological studies and assessment of wildlife populations, with particular reference to endangered species. Each State has an agency which establishes and manages national parks and nature reserves, and manages wildlife populations within the State.

Special arrangements have been made for minimising the environmental impact of uranium developments in the Northern Territory. The Commonwealth has appointed a Supervising Scientist who has overall responsibility for protection and restoration of the environment in the Alligator Rivers Region from the effects of uranium mining.

Special measures have been taken to protect the Great Barrier Reef which has been entered on the world Heritage List. The Great Barrier Reef Marine Park Act provides for the establishment, control, care and development of a marine park in the Region and for the establishment of the Great Barrier Reef Marine Park Authority to carry out these functions. The Marine Park is being progressively expanded through the successive proclamation of areas of the Reef. It is the policy of both the Commonwealth and Queensland Governments to prohibit any drilling on the reef, or drilling or mining which would damage the reef.

The Australian Ionising Radiation Advisory Council advises and makes recommendations to the Government on the various actual and potential sources of ionising radiation exposure on the Australian population and environment.

Other environment protection and conservation activities with which the Commonwealth is substantially involved, generally in association with the States, include control of imports and exports of flora and fauna, protection of cetacea, the notification and assessment of environmentally hazardous chemicals, development of codes of practice for radioactive materials, assessment of the quality of the marine environment, control of oil spills and dumping of wastes at sea, studies of the economics of pollution control, studies of environment energy interactions, assembly of environmental statistics, state of the environment reporting, and development of long-term strategies for the control of air pollution.

CULTURAL ACTIVITIES

Cultural organisations and financial assistance for the arts

In Australia the arts are given financial support on several levels. The main sources of subsidy are the Commonwealth and State governments, but support has been increasing recently from local governments and universities. Support from private sources is still limited, but inclusion of the arts in the benefits of private foundations and sponsoring of awards and scholarships is gradually increasing. While support is received indirectly through government educational, cultural and other public service instrumentalities, three organisations have played a significant role in serving and financing the arts: the Australia Council, the Arts Council of Australia, and the Australian Elizabethan Theatre Trust.

The Australia Council

The Australia Council is the Commonwealth Government's chief funding and policy making body for the arts. Established as a statutory authority in 1975, its responsibilities are detailed in the Australia Council Act. Broadly speaking the Council's brief is to formulate and carry out policies to help raise the standards of the arts in Australia, to enable and encourage more Australians to become involved in the arts and to make Australians and people in other countries morely closely aware of Australia's cultural heritage and achievements. Artists and arts organisations are assisted financially by the council under policies developed through its specialist art form Boards in Aboriginal Arts, Community Arts, Crafts, Literature, Music, Theatre and Visual Arts. Each of the Council's specialist Boards has a membership between six and eight part-time members (except the Aboriginal Arts Board which has between eight and ten) who are required to be practising artists in that specific art form or closely involved with the arts. Reports on the activities of these Boards appear in the relevant sections following.

Council also maintains several other programs in support of International Activities, Design Arts, Multicultural Arts, Education and the Arts, Youth Arts, Local Government and the Arts, and Working Life.

The Australia Council consists of a full-time Chairman, appointed in 1981, and thirteen part-time members including artist members, members from the community, two Government members (currently representing the Department of Home Affairs and Environment and the Department of Education and Youth Affairs), and not less than two Board Chairpersons. Membership of the Council is intended to represent a broad cross-section of the arts community as well as to ensure access to knowledge and experience relevant to the work of the organisation.

COMMONWEALTH GOVERNMENT FUNDS ALLOCATIONS TO THE AUSTRALIA COUNCIL
($ million)

Year	*1981–82*	*1982–83*	*1983–84*
Budget	30.30	33.60	37.90

ALLOCATION OF FUNDS FOR PROGRAMS, BOARDS AND ADMINISTRATION OF THE AUSTRALIA COUNCIL, 1983–84
($'000)

Boards	
Aboriginal Arts	1,980
Community Arts	2,603
Crafts	1,492
Design Arts	250
Literature	2,165
Music	9,270
Theatre	10,274
Visual Arts	1,698
Total boards	*29,732*
Programs	
Arts Information	290
Australian Copyright Council	130
General Program	168
International	220
Policy/Research	220
Touring Program	750
Incentive Funds	1,000
Total programs	*2,778*
Total support for the arts	32,510
Administration	5,390
Total appropriation	**37,900**

The Arts Council of Australia

The Arts Council of Australia is an independent, non-government, incorporated body funded by State Government Arts Authorities and the Commonwealth Government through the Community Arts Board of the Australia Council. The Central Secretariat of the Council is in Sydney, with Divisions in all States and Territories.

1981 saw major changes in the nature of the Arts Council's activities. The historical role of providing quality artistic experiences to country areas by way of centrally-organised tours has been diminishing over the last few years. This trend is continuing. Due to a need to ensure that the current philosophy and policy of the Arts Council is relevant to the perceived needs of the communities which it serves, activities moved towards locally-initiated projects and the development of branches as autonomous organisations. The development of programmes such as Arts Access, Arts Roundabout, Country BLiPS and Access provided greater access to and participation in a much wider range of arts experiences—from traditional tours by State theatre, opera and ballet companies, to local festivals and workshops and from theatre-in-education teams to resident drama directors and community murallists. The volunteers on whom the Arts Council depends receive substantial support and help, in the form of advice, resources and training.

The Arts Council also administers grants on behalf of other bodies such as the Australia Council, State Arts Authorities and other government departments.

Australian Elizabethan Theatre Trust

The Australian Elizabethan Theatre Trust, which was established in the mid 1950s, was originally formed to present drama, opera, ballet and puppetry throughout Australia. Full autonomy has now been accorded to most of the performing companies established by the Trust. The Trust's major functions now are to administer the Elizabethan Trust Orchestras; to act as entrepreneur in the touring of theatre features from overseas and Australian sources; and to provide general services, including tax deductibility for donations, for theatre organisations. In 1982–83 the Trust presented national tours by the Peking Opera and Sadler Wells Royal Ballet.

The Trust receives annual grants from the Commonwealth Government through the Australia Council and from State and local governments. Its revenue is supplemented by subscriptions, donations and its own activities.

The performing arts

Festivals

The number of festivals devoted solely or partly to the arts now total about 400 a year. The two biggest are Adelaide's biennial and Perth's annual festivals, both of which last several weeks and present overseas artists as well as leading Australian companies. Victoria's large popular festival, 'Moomba', has a substantial arts program.

Many country centres now have arts festivals which attract performers and artists from a wide area. Purely amateur and competitive performances are being infused with increased professionalism. Seminars, arts workshops and community participation programs are increasingly popular.

Theatre

The aim of the Theatre Board of the Australia Council is to improve the quality of the content, performance and production of dance, drama, puppetry, mime and youth theatre and to ensure maximum public access to them. The Board provides opportunities for professional theatre people to develop their skills, encourages growth in theatre attendance and promotes community involvement in live theatre. It provides continuing support for some sixty six drama, dance, puppetry, mime and youth companies which attract audiences running into millions annually. General grants which constitute the Board's major outlay are given to professional organisations offering the highest standards of performance, training and production for a period of up to one year. The Board's objective is to support a sufficient number of properly subsidised non-commercial theatre companies offering a range of productions in the classic and contemporary repertoire. It regards of equal importance the funding of other professional companies especially those concentrating on the development and presentation of new theatrical styles, new writers and new choreographers.

Commercial theatre organisations and entrepreneurs present musicals and plays and arrange visits by overseas companies.

Opera

The Australian Opera (formerly the Elizabethan Trust Opera) is the largest performing arts organisation in Australia employing over 200 permanent staff including 40 principal singers and a chorus of 50. In addition, it employs over 500 casuals each year, including a number of celebrated international singers. The projected budget for the Australian Opera in 1983, excluding the cost of orchestras, is over $14 million. This is derived from the following sources—55% box office, 34% government subsidy, 11% private contributions. The Australian Opera, headquartered in Sydney, tours annually to Melbourne, Brisbane and Canberra. Free opera performances in the parks and television and radio activities are increasingly being utilised by the company to provide access to all Australians throughout the continent.

Ballet

The Australian Ballet Foundation, established as a national ballet company gave its first performance on 2 November 1962. The 1982 operating and other expenses of the Australian Ballet, excluding the services of the Elizabethan Trust Orchestras which perform for the ballet, were $7,112,000. This was financed in part by Commonwealth Government subsidy (through the Australia Council) ($1,602,000) and State, Territory and local Government grants ($236,000).

The Australian Ballet celebrated its 21st Anniversary in 1983 and commemorated it with a number of special activities.

Music

The Music Board of the Australia Council encourages and supports the development of music in Australia and the promotion of Australian music and musicians overseas. It works to extend opportunities for musicians, to stimulate composition and to encourage diversity in music training. It helps to meet community music needs and fosters the exchange of information and resources between groups, both within Australia and internationally. The Board also provides subsidies for major performing and entrepreneurial organisations, such as The Australian Opera, the Australian Elizabethan Theatre Trust orchestras which support The Australian Opera and the Australian Ballet, and Musica Viva Australia. Financial assistance is provided by the Board for a range of musical activities grouped under four main headings; Composition, Performance, Education and Documentation.

Australia has eight fully professional orchestras. Six symphony orchestras have been established—one in each State capital. They are managed by the Australian Broadcasting Commission (ABC). Two Elizabethan Theatre Trust orchestras are predominantly engaged in work with the Australian Opera and Ballet.

The ABC organises about 750 concerts—both symphony and recital—each year.

Musica Viva Australia, a non-profit society receiving financial support from the Music Board of the Australia Council and several State Governments, seeks to increase the performance, knowledge and appreciation of chamber music through subscription concerts, festivals, workshops and education activities. Musica Viva presents concerts by distinguished overseas ensembles and by groups of leading Australian musicians and organises overseas commercial tours for Australia's leading ensembles. The Society manages approximately 800 concerts within Australia and overseas each year.

Film

Australian Film Commission

The Australian Film Commission (AFC) is an independent statutory authority established by Act of Parliament in 1975.

The AFC's functions are to encourage the production, distribution and exhibition of Australian films, and to produce films of national interest and for the Government's departmental needs.

Financial assistance is provided for script and project development and film and television production through the Project Development Branch and the Creative Development Branch (including the branch-administered Women's Film Fund). The Marketing Branch offers advice on marketing, loans for distribution and exhibition, representation at international festivals, and maintains offices in London and Los Angeles. The AFC's film production branch, Film Australia, produces 76 films per year (in over 26 foreign versions) for client government departments, and on issues of national interest for distribution in Australia.

Recent amendments to the income tax legislation have attracted private sector involvement in film production, with total annual expenditure at approximately $73 million. As a result of these incentives, the AFC shifted its support into the areas of script and project development — expenditure not eligible for tax concessions. Where AFC production investment represented up to 50% of total production expenditure, this involvement is now curtailed to between two and three per cent.

This was a difficult year for film producers with finance scarce and new Companies Code legislation delaying production schedules. However, 23 feature films, four mini-series, five telemovies and countless documentaries went into production, and *The Man From Snowy River, The Year of Living Dangerously* and *We of the Never Never* attracted excellent local audiences and were successful internationally.

Films due for release during 1983–84 such as *Phar Lap, Careful He Might Hear You, Razorback* and *BMX Bandits* promise to sustain interest in the Australian cinema.

Australian Film and Television School

The Australian Film and Television School established as an independent statutory authority by Act of Parliament in 1973 is governed by a fifteen-member Council. It is responsible for advanced film, television, radio and audio-visual communications training throughout Australia.

The School has three principal training branches:

Full-time program—a three year full-time course providing practical and professional training for creative positions in the film and television industry. Graduates are awarded a Diploma of Arts, Film and Television.

—a full-time workshop course in screenwriting of up to one year for writers of proven ability.

Open program—provides, on an Australia-wide basis, training courses of shorter duration including workshops, seminars, lectures and refresher courses for people involved in various film and television crafts, to teachers and educational institutions for people requiring education and practical training in communication fields and to those in other areas who use or intend to use audio-visual media in their professional work as tools for education, information, documentation or research;

—operates an advisory service, through the Writers Centre, for scriptwriters at all levels of experience and throughout Australia.

—produces and distributes training films, video and audio tapes and publications.

National Graduate Diploma in Media—a one year (or part-time equivalent) Graduate Diploma in Media. This is intended to equip teachers with the knowledge and skills needed to design and implement media curricula and to increase expertise in the use of audio-visual teaching resources. The Scheme presently operates in Queensland, New South Wales, Victoria, South Australia and Western Australia.

In addition, the School undertakes, co-ordinates and disseminates research on the communications media and assesses training needs and employment opportunities in the industry, and maintains an extensive collection of film, television, radio and other audio-visual reference materials.

Film Censorship

The Commonwealth's censorship powers derive from Section 51 (1) of the Constitution, which enables the Commonwealth to regulate trade and commerce under the Customs Act. Section 50 (1) of the latter Act provides that the Governor-General may, by regulation, prohibit the importation of goods into Australia. The Customs (Cinematograph Films) Regulations, which establish the Film Censorship Board and define its legislative role and functions, flow from that Section.

The Board is a full-time nine-member statutory body located in Sydney. Regional censorship officers, with limited powers and functions, are located in Canberra, Melbourne, Brisbane, Adelaide and Perth. The Board is administered by the Attorney-General's Department.

Under the Customs (Cinematograph Films) Regulations, the Board examines imported films and videotapes to determine whether to register or to refuse to register them for entry into Australia. It also examines imported film advertising. The Regulations direct the Board not to pass films or advertising matter which in its opinion meet specified criteria.

The Board classifies imported television programs by virtue of a ministerial arrangement with the Australian Broadcasting Tribunal. The Board's State functions, including classification, are performed by virtue of formal agreements with the various States. Decisions on mattters arising under the Regulations and the State Acts may be appealed to the Films Board of Review.

Decisions on all the above matters are determined by a majority vote.

Thirty-five mm feature films. In 1982, 792 feature films (including 35 Australian films) were examined. Thirty eight feature films were rejected and 27 were cut. There were 15 appeals, of which 6 were upheld and 9 dismissed. Of the 792 features, 64 were classified For General Exhibition ('G'), 135 Not Recommended for Children ('NRC'), 295 For Mature Audiences ('M') and 190 For Restricted Exhibition ('R'). Seventy were registered subject to special conditions.

The principal suppliers were United States of America (268 films), Hong Kong (179 films), West Germany (38 films), France (37 films) and Australia (35 films).

While the 'M', 'NRC' and 'G' classifications are advisory, persons who have attained the age of two years and who have not attained the age of 18 years are excluded by law from seeing 'R' rated films.

Sixteen mm feature films. Excluding those imported for television use, 303 feature films (including 31 Australian films) were examined. Sixteen were rejected.

Television films. In 1982, 11,628 items for use on television were examined. These consisted of 3410 sixteen mm films and 8218 videotapes. The principal suppliers were the United States (6740 items) and the United Kingdom (2311 items). Of the total imports, 97 items were cut and 31 were classified as unsuitable for television.

Videotapes. The increase in the number of videotapes noted in 1981 continued in 1982. Those examined (other than those for television) comprised 176 cinema titles and 5133 non-cinema titles.

Eight mm films. 620 films were examined during 1982.

Advertising Matter. 8309 items intended for use in the promotion of theatrical motion pictures were examined.

Art

The Visual Arts Board

The Visual Arts Board of the Australia Council aims to help the individual artist develop the highest levels of creative achievement and to foster a greater awareness of contemporary Australian artists and their work through the dissemination of ideas, advocacy, scholarship, art criticism and information. The Board provides assistance to individuals and organisations working across a wide spectrum of the visual arts in Australia, from painting and sculpture to museology. Its programs include grants to individuals, the commissioning and placing of works of art in public places, research and writing on the visual arts, support for artists in residence and the acquisition, exhibition and conservation of works of art.

The Aboriginal Arts Board

The aims of the Aboriginal Arts Board of the Australia Council are based on the right of the indigenous people of Australia to determine the future of their own cultural heritage. The Board's responsibility is to provide support to promote and develop activities which give expression to this basic right. This involves traditional cultural practices and their resultant art forms, the representation and preservation of Aboriginal culture generally and the generation of new forms of artistic expression among Aboriginal people in urban and country areas. All members of the Board are Aboriginals, selected from nominations made mainly by Aboriginal community organisations and are generally involved in arts and cultural programs in their own communities.

The Australian National Gallery

The Australian National Gallery contains the National Collection of Australian Art and representative collections of the arts of other cultures and times. These collections include:

- International art before 1850;
- International art from 1850;
- International prints and illustrated books;
- Photography;
- African, Oceanic and Pre-Columbian art; and
- Arts of Asia and South-East Asia.

The first part of the year was spent in preparation of the Gallery for the ceremonial opening by Her Majesty Queen Elizabeth II on 12 October 1982 . The Gallery opened to the public the following day. In the six months following the opening half a million people visited the Gallery to see permanent displays from the National Collection of Art and changing exhibitions from the collections of photography, international prints and theatre arts. Many visitors attended the gallery's education programmes and 5,000 memberships of the Gallery Association were taken out, covering 12,000 individuals.

Commonwealth Government funding for 1982–83 increased to $15.4 million, of which $4 million was provided for acquisitions of works of art and $1.7 million for final display fitout and loose furniture.

The Gallery mounted one major exhibition in Melville Hall at the Australian National University, the venue for contemporary art. *Australian Art of the Last Ten Years—The Philip Morris Arts Grant* was a selection of works from the Philip Morris Arts Grant. On 11 October 1982 the entire collection was presented as a gift to Australia, to be permanently housed at the Gallery.

Other Galleries

Other important art collections are housed in the Australian War Memorial and in public galleries in all State capitals and many of the larger country centres. As well as these galleries there are many municipal and private trust institutions, and university and private collections.

Community Arts and Crafts

Community Arts Board

The main responsibility of the Community Arts Board of the Australia Council is fostering the development of a wider participation in the arts. This responsibility also includes activities involving more than one art form such as arts centres, workshops and festivals. Support is also provided for organisations which serve the needs and interests of particular community groups, for example ethnic communities, outer suburban groups or people in disadvantaged and remote areas.

Crafts Board

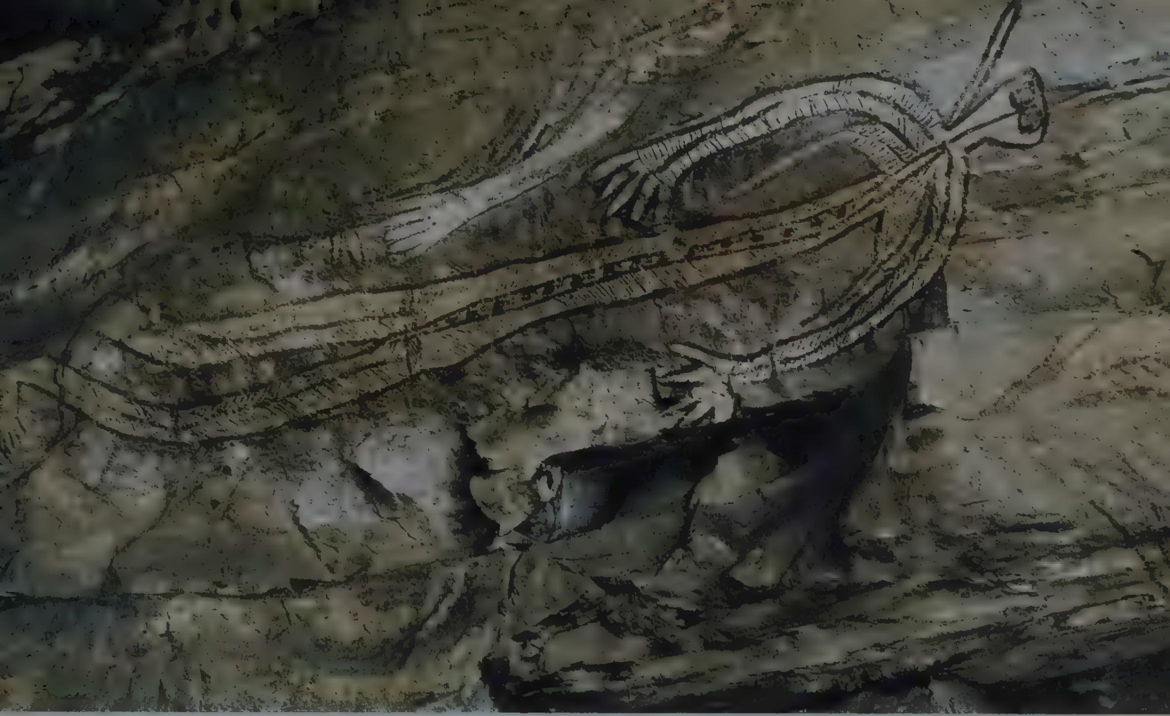
The aims of the Crafts Board of the Australia Council are to encourage continuing improvement in the quality of crafts practised in Australia, to provide greater opportunities for craftspeople to further their professional development and to earn a living from their crafts, to foster wider community access to the crafts and to create an awareness of Australian crafts overseas and of work of other countries in Australia. The Board emphasises the improvement of education and training in the crafts, giving priority to professional training and workshop experience and to the development of resource materials to meet educational needs at all levels.

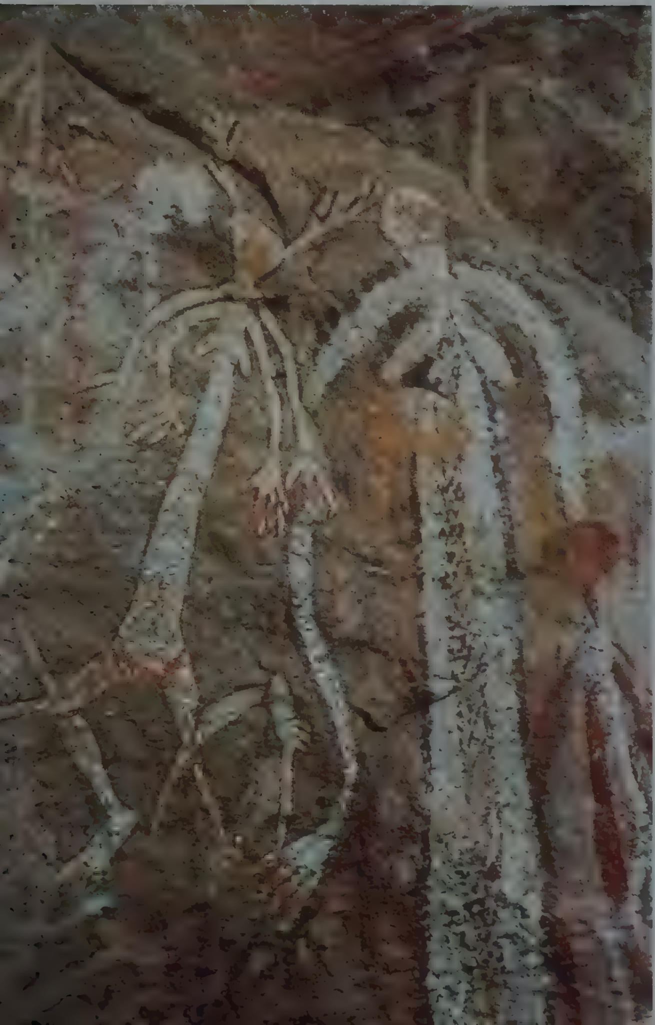
Museums

In each State there is at least one major State-run museum. There are also many smaller museums owned by municipal councils, district and historical societies, private trusts and private individuals. The two major national museums in the Australian Capital Territory are the Australian War Memorial and the Australian Institute of Anatomy.

The Australian War Memorial

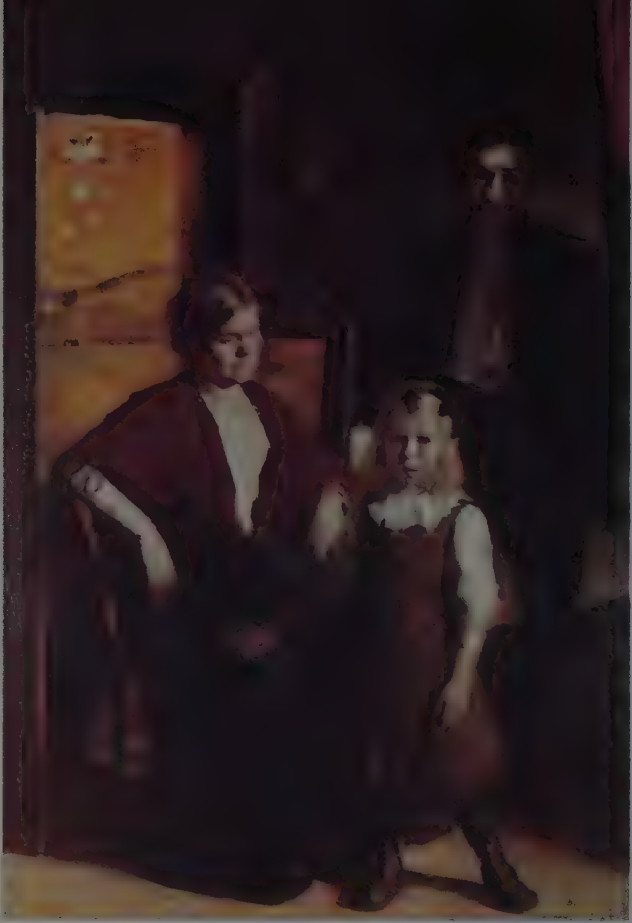
The Australian War Memorial commemorates Australian Servicemen and women who died as a result of wars or warlike operations, from the Sudan (1885) to Vietnam. The commemorative area includes the magnificent glass-mosaic Hall of Memory, Cloisters containing the bronze panels of the Roll of Honour bearing 102,000 names, and the Courtyard in which there is the Pool of Reflection and a water cascade symbolising eternal life. The names of the 30 main theatres of war in which Australian forces served are inscribed around the Courtyard. The national Anzac Day and Remembrance Day





Top
Human like figure found at Nangalor Gallery, Kakadu National Park, Northern Territory.
Photo: C. Totterdell, Australian National Parks and Wildlife Service.

Left
Group of female spirits Norlangie Rock area Kakadu National Park, Northern Territory.
Photo: P. Wellings, Australian National Parks and Wildlife Service.

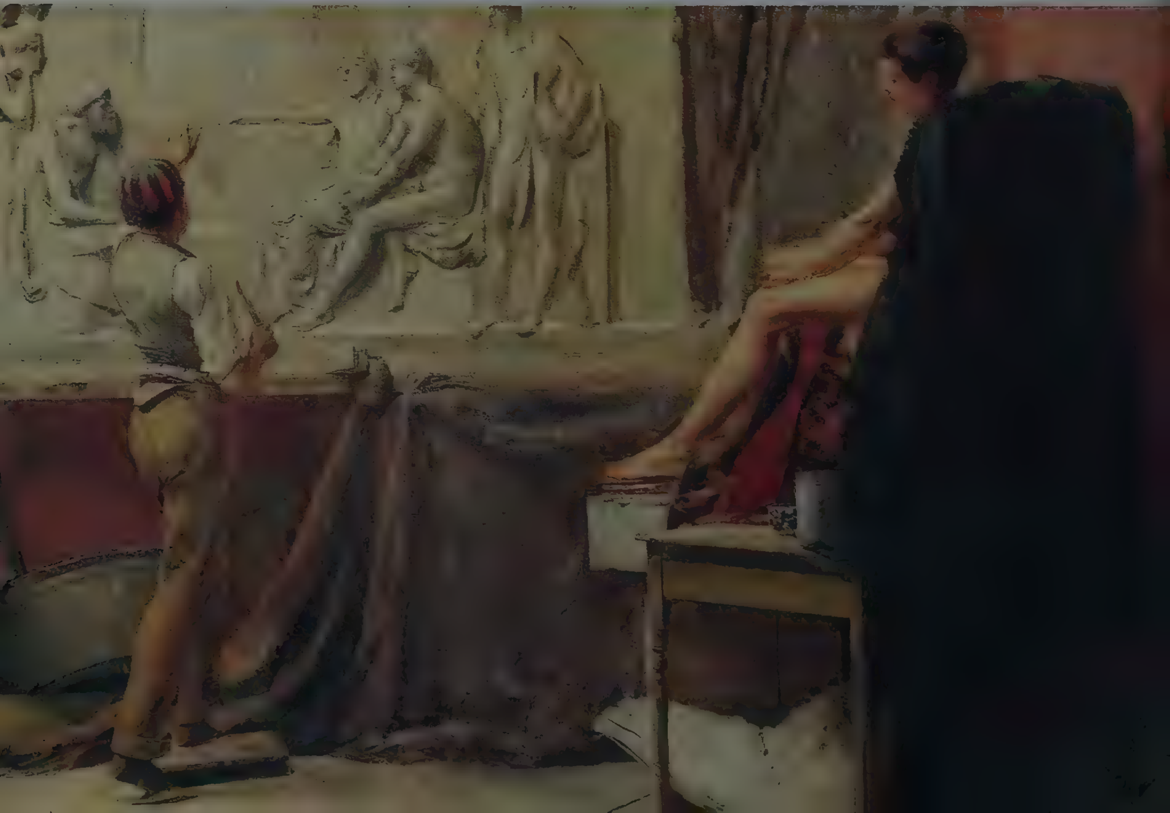


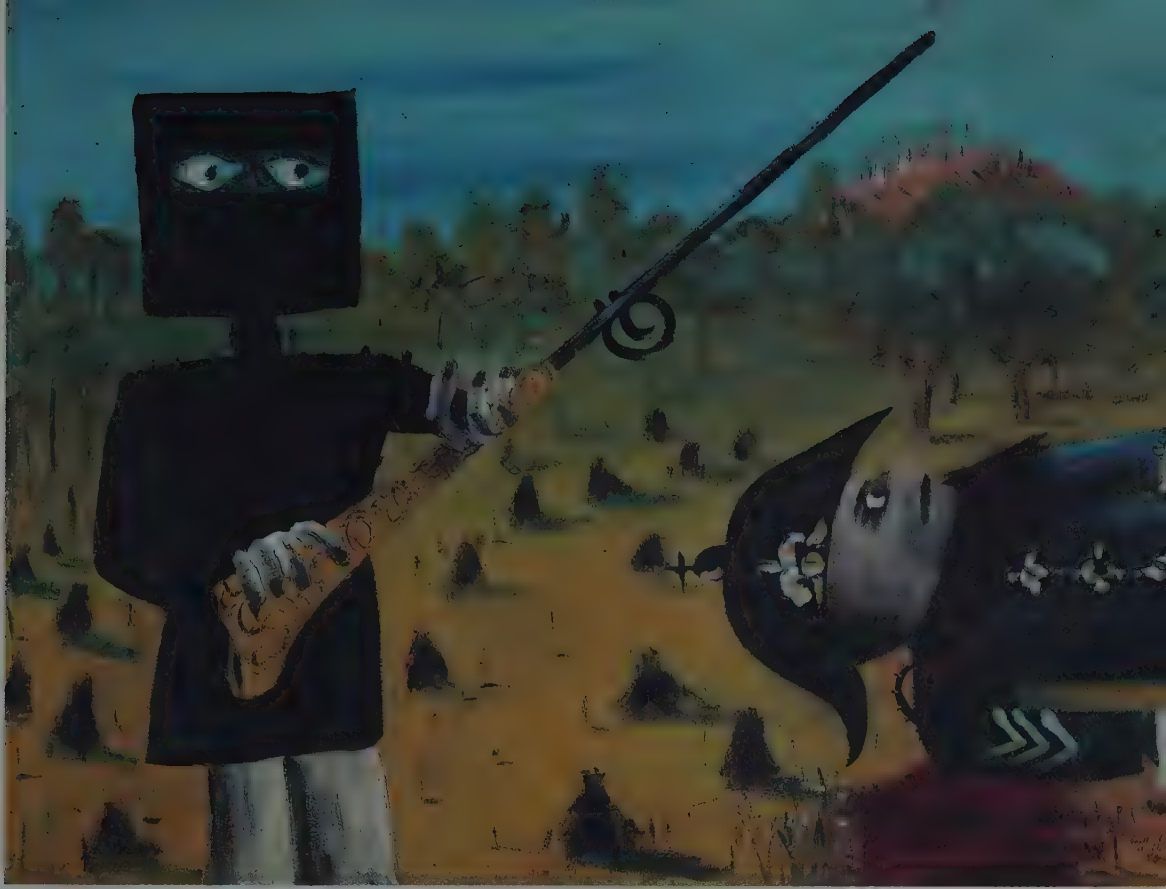
Left
Max Meldrum
Australia 1875-1955
Family group
1910-11 Pace, Brittany
Oil on canvas, mounted on board
(140.0 x 217.5cm)
Purchased 1969
Collection: Australian National Gallery, Canberra

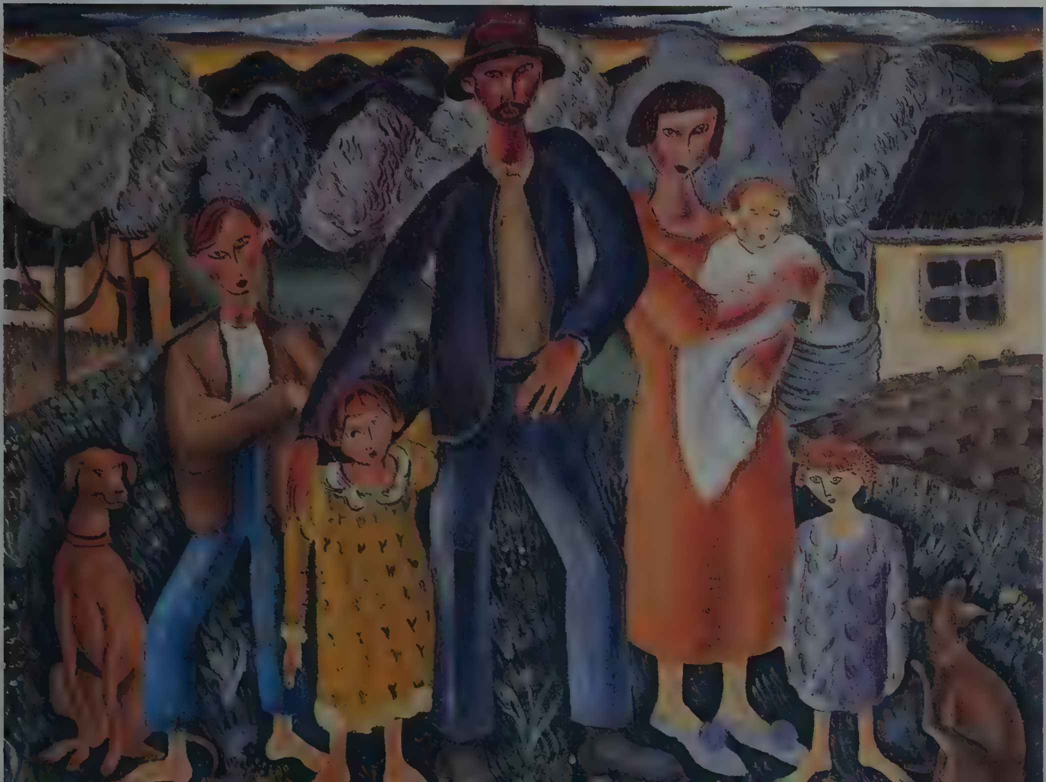
Bottom left
Tom Roberts
Australia 1856-1931
The sculptor's studio 1885
Oil on canvas
(61.2 x 91.8cm)
Purchased 1971
Collection: Australian National Gallery, Canberra

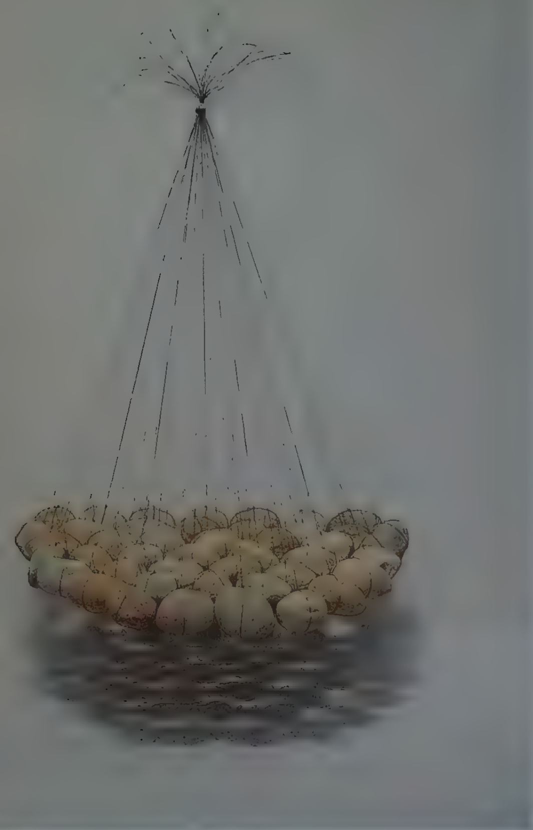
Right
Sidney Nolan
Australia born 1917
Death of Sergeant Kennedy at Stringybark Creek
1947 Heidelberg
Enamel on composition board
(91.5 x 122cm)
Gift of Sunday Reed 1977
Collection: Australian National Gallery, Canberra

Bottom right
Russel Drysdale
The rabbiter and his family 1938
Oil on canvas
(61.5 x 76.7cm)
Purchased 1980
Collection: Australian National Gallery, Canberra





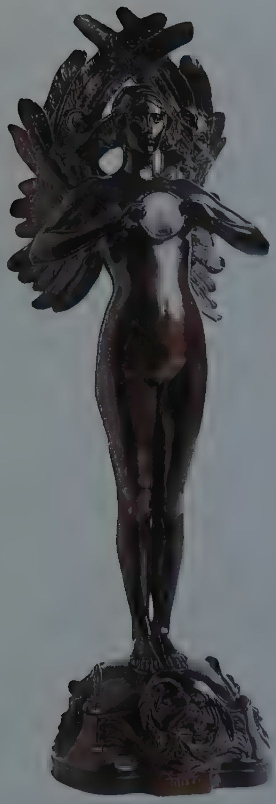


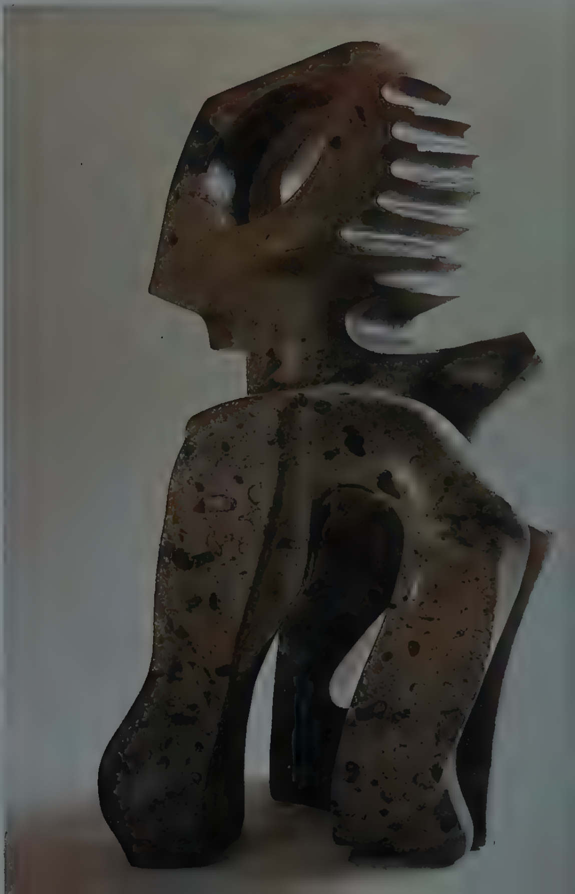


Left
Ken Unsworth
Australia born 1931
Untitled 1975
River-stones, steel wires
(215.0 x 104.0cm)
Purchased 1976
Collection: Australian National Gallery, Canberra

Bottom left
Bertram Mackennal
Australia/Great Britain 1863-1931
Truth 1894
Bronze (62.0 x 19.5 x 17.5cm)
Purchased 1973
Collection: Australian National Gallery, Canberra

Bottom right
Danila Vassilieff
Australia 1897-1958
Mechanical man 1953
Lilydale limestone (48.0 x 20.0 x 24.5cm)
Purchased 1973
Collection: Australian National Gallery, Canberra





services attended by the Governor-General are held at the Stone of Remembrance in front of the building. Other wreath-laying ceremonies are also conducted at the Commemoration Stone in the Courtyard.

As well as the nation's Memorial, it is also a significant museum and art gallery, containing some 40,000 war relics ranging from aircraft to commemorative badges, and 12,000 works of art by leading Australian artists, including Nolan, Dobell, Streeton and Lambert. The Memorial's 28 Victoria Crosses are the largest such single collection in the world. The spacious galleries also display mosaics and antiquities dating from around the fifth century, sculptures, dioramas, photographs and documents. In addition, the Memorial contains an extensive documentary and audio-visual records centre (detailed on page 737), and operates an Education Service providing study units for visiting student groups and information for teachers and students.

The Memorial is a major tourist attraction, receiving about a million visitors each year, including foreign Heads of State, political and Service leaders. Free screenings of historic wartime films are given every weekend and during school holidays and Voluntary Guides are available to provide free conducted tours on weekdays, including special tours for the blind and visually-impaired.

The *Australian War Memorial Act* 1980 extended the Memorial's educative role, and upgraded the administration. The Memorial is administered by a Director and Council of up to 13 members and is responsible directly to the Minister for Home Affairs and Environment.

The Memorial building, opened in 1941 and extended in 1971, is being further extended and the galleries upgraded. A conservation and storage annex was opened in 1979. The Memorial has begun a program of major renovations to the galleries with the creation of an Introductory Gallery which provides an overview of Australian military history since 1788. The War Memorial and its surrounds were entered in the Register of the National Estate in October 1981.

Museum of Australia

The Museum was established under the *Museum of Australia Act* 1980. The planning for the museum is being undertaken by an Interim Council appointed in December 1980.

The Museum will be Australia's first national museum of history, and will have three major themes: Aboriginal history, non-Aboriginal history, and the interaction between a person and the environment.

Literature

Literature Board

The Literature Board of the Australia Council aims to encourage all forms of Australian creative writing through direct grants to writers and the subsidising and promotion of the resultant works. More than one half of the Board's annual expenditure goes in grants to writers, in the form of fellowships, general writing grants, special purpose grants to assist writers to meet travel, research and other expenses in connection with particular projects and emeritus fellowships (formerly literary pensions). The Board also assists a number of national literary organisations, festivals and seminars and encourages the overseas promotion of Australian literature. It also has a program to subsidise writers and playwrights-in-residence in conjunction with tertiary institutions and theatre companies.

Libraries

Australian Government Libraries

National Library of Australia, Canberra. The National Library was formally established under the *National Library Act* 1960, which came into effect in March 1961. It was previously part of the Commonwealth Parliamentary Library. The National Library maintains and develops a national collection of library material in all subject fields and from all countries. It is also responsible for assembling a comprehensive collection of library material relating to Australia and the Australian people. In fulfilling its functions, the Library seeks to preserve books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, music scores, sound recordings and other material. Under the deposit requirements of the *Copyright Act* 1968, a copy of all printed material published in Australia is delivered to the National Library (11,064 books, pamphlets, etc., were received in 1982). The Library has also been enriched by the acquisition of such notable collections as the Petherick collection of Australiana in 1911, the Cook manuscripts in 1923, the Mathews ornithological collection in 1940, the Rex Nan Kivell collection of Australian and Pacific interest in 1959, and the Ferguson collection of Australiana in 1970. The Library maintains a permanent exhibition of paintings, prints and other historical material selected from its various collections.

The National Library's collection of Australian and overseas material contains more than 3 million volumes, including microfilms, 36,200 paintings, drawings and prints; 387,040 photographs; 5,280 shelf metres of manuscripts; 307,400 maps; 550,000 aerial photographs; 74,522 music scores, 441,000 sound recordings and tapes; and 10,000 oral history tapes. These materials may be used in the Library's reading rooms and in some cases are also available through the national inter-library loan system, in which the Library is a major participant. The Library is functionally oriented, with three main Divisions—Reference, Technical Services, and Co-ordination and Management, together with a Secretariat. Information about the activities of the Library's Divisions, including its publication program, may be found in the Library's Annual Reports.

The provision of central cataloguing services by the National Library achieves cataloguing economies on a national scale. The Australian Bibliographic Network, a national on-line shared cataloguing system, was launched by the Library in November 1981. Bibliographic records for Australia and overseas books are available from the Library, both as catalogue cards and in machine-readable form. Under its Cataloguing-in-Publication program, the Library supplied cataloguing data to Australian publishers in advance of publication so that they may be printed in their books.

Co-operative bibliographical activity includes recording, in a series of union catalogues, the holdings of the major Australian libraries. Among these are the national union catalogue of monographs (published on microfilm), *Serials in Australian Libraries, Social Sciences and Humanities* (which compliments another catalogue, *Scientific Serials in Australian Libraries*, published by the Commonwealth Scientific and Industrial Research Organization), catalogues of manuscripts, newspapers, music and oriental language material and special library material for the handicapped. These are described in the *Guide to the National Union Catalogue of Australia*.

Other aspects of the National Library's role in the user community and as a research centre include its involvement in a project to microfilm records relating to Australia and held in Great Britain and elsewhere, its rapidly developing archives of films, sound recordings and oral history, its provision of the Australian MEDLINE Network and the use of overseas data bases in its reference services, and its special section on library services to the handicapped.

A particularly important contribution to the National Library's role in the library community is its support of two national consultative bodies. The Australian Advisory Council on Bibliographical Services is a co-operative association of libraries and other information agencies which seeks to encourage the development of their resources and services. The National Library provides the national secretariat and meets the administrative costs of the Council's standing committee. The National Library also provides the secretariat for the Australian Libraries and Information Council which advises Commonwealth and State Ministers on the nation-wide co-ordination of library and related information services.

Patent Office Library. The library of the Australian Patent, Trademarks and Designs Office in Canberra contains approximately 12,000 books and a wide variety of periodicals and other literature relating to science, technology, industrial property (patents, trademarks and designs), law and practice. Patent specifications of inventions are received from the principal countries of the world and held in the Documentation Centre. Present holdings are over 15,000,000 with an estimated 600,000 patent specifications received annually. The Australian Patent Information Service works in co-operation with the Library. Its major function is to make Australian industry aware of the wealth of technological information held in the world collection of patent literature and assist them in accessing this information. Australian specifications and related material are also available at sub-Offices in Brisbane, Sydney, Melbourne, Adelaide, Perth and Hobart.

United States specifications are available in all sub-offices other than Hobart. Information officers are located in the Sydney and Melbourne sub-offices to assist the public to access patent literature.

Commonwealth Scientific and Industrial Research Organization (CSIRO). The Central Information, Library and Editorial Section (CILES) was formed at the end of 1973. Its objectives are to provide information, library, translation, editorial, publishing and archival services in all fields of science and technology other than clinical medicine.

The Central Information Service complements the information programs of the 40 or so CSIRO Divisions and, in addition, produces numbers of data bases such as *CSIRO Index, Australian Science Index* and directories such as *Scientific and Technical Research Centres in Australia*. It also provides computer-based search services and a question-and-answer service. The Central Library is the co-ordinating centre for the CSIRO Library Network of some 70 libraries and book-holding centres providing acquisitions, bibliographic, reference and document support for the entire system. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries, and maintains the constantly updated *Scientific Serials in Australian Libraries* as well as extensive collections of scientific and technical publications. The Editorial and Publications Service produces publications on behalf of the Divisions and, with the Australian Academy of Science, is responsible for publishing the Australian Journals of Scientific Research. The activities of the Section are fully reported in the regularly issued *CILES' Report*.

The Australian War Memorial Documentary and Audio-visual Records Centre, Canberra. The Centre preserves the documentary and pictorial records of Australia's participation in armed conflicts. Printed material includes over 80,000 volumes (books and bound periodicals); thousands of unbound periodicals; leaflets; souvenir and microfilm items; a large collection of military maps; newscuttings and newspapers; sound recordings; war posters; postage stamps; and currency. Official records and personal papers occupy almost 2,000 metres of shelving. Official war photographs covering the 1914–18, 1939–45, Korean and Vietnam wars number over 670,000, and there are about 1.5 million metres of cinefilm. Facilities exist for reference and research.

The Commonwealth Parliamentary Library. The Library provides comprehensive information and research to the Commonwealth Parliament through the Legislative Research Service and the Library, Reference and Information Service. The Research Service comprises groups staffed by subject specialists who prepare analyses and interpretations of specific issues with which the Parliament is or may be concerned. The Library, Reference and Information Service answers questions and provides information from printed and other published sources. The Library collection is concentrated on topical material, supported by a wide collection of standard references; it totals some 100,000 volumes, including 9,000 serial titles. The Library publishes the Commonwealth Parliamentary Handbook, which is a standard reference work, occasional annotated reading lists, background papers, digests of bills and, in alternate fortnights the Index to Current Information and Select List of Acquisitions. Extensive use is made of computer and on-line services, particularly in such areas as economic and electoral statistics and in the provision of information by librarians.

Other Commonwealth Government libraries. Current and retrospective information is available in Australia's special libraries. For a detailed listing of the libraries see the *Directory of Special Libraries in Australia.*

Library services in the Territories. The Northern Territory Library Service operates three public libraries in Darwin, and one each in Alice Springs, Katherine and Tennant Creek, and in co-operation with the Department of Education operates a community library in Nhulunby and Bamyili. At 15 September 1982, book stocks totalled 220,000 volumes, and 2,147 films were available in the film library. A country borrower programme is operated to service isolated areas.

The Department of Territories and Local Government conducts the Canberra Public Library Service to residents of the Australian Capital Territory.

State libraries

Most municipal councils in the States have libraries funded largely by State governments. A detailed description of State libraries is given in each State Year Book.

Children's libraries and school libraries

Children's libraries exist in all States, usually as branches or extensions of State or municipal libraries.

University and college libraries

The Commonwealth Government has since 1957 supported the development of university and college of advanced education libraries.

Archives

Australian Archives

The need for a Commonwealth archival agency was recognised in 1943 when the Curtin Government appointed both the Commonwealth National Library and the Australian War Memorial as provisional archival authorities. In 1952, the Commonwealth National Library became the sole Commonwealth archival authority. In 1961, the Archives Division of the Library was reconstituted as a separate agency known as the Commonwealth Archives Office. As Archival Authority, the Archives Office became responsible for the evaluation, disposal and preservation of Commonwealth records, and for taking into custody all records no longer required for immediate reference and for regulating access to those records by research workers and other members of the public. In 1974, the Commonwealth Archives Office was re-named the Australian Archives, and a Director-General was appointed in 1975.

The Australian Archives is not simply the custodian of the 'antique' records of government; it also has a vital role to play in gathering, applying and providing information on the existence, nature and whereabouts of the total body of Commonwealth records and on the agencies, past and present, responsible for them. The environment of changing relationships between the public service and society, which is expressed in the Government's concern to ensure openness and accountability, to protect privacy and to provide means of public redress at law, makes records, recorded information and the ways in which they are handled, issues of increasing importance.

The Australian Archives has continued its transition from an agency chiefly concerned with meeting the needs of historical research to a central service agency specialising in the broad management of the records of the Commonwealth Government.

On 28 October 1982, the Government announced that it had accepted the need for a prestige headquarters building for the Australian Archives at an estimated cost of more than $30 million. The building will be located in the Parliamentary Triangle on the edge of Lake Burley Griffin, where it will join other buildings of national significance—The National Library, The High Court and The National Gallery. The building is expected to be completed in 1986/87. In announcing the decision, the Prime Minister said the Government had decided that only a high quality building would be appropriate to serve the National Archives Headquarters in Canberra and cater properly for the research, cultural and social aspects of archival operations. He added that modern archives were proving to be not just repositories of historic documents, but places of great historical, artistic and cultural significance, and of particular benefit in the fields of education and tourism.

To meet the ever increasing demands placed on Australian Archives, a large scale consultancy assignment on possible ADP applications within Australian Archives was conducted. The consultancy concluded that given the increase in quantity, and diversity of records coming into custody, the current system is under great pressure and in danger of collapse. As a result, Australian Archives has developed an ADP Strategic Plan, which identifies the ways in which ADP applications can improve the Archives' capacity to gather, process and make available a greater flow of information about Commonwealth records; improve the delivery of services to Commonwealth agencies and the public; and improve the management operations of the Archives.

On 2 June 1983, the new Government introduced a revised Archives Bill into Parliament. The introduction of the Bill is a recognition that the processes of Government are under greater scrutiny than ever before, and that management practices must be able to withstand public review. The Archives Bill provides scope for the development of a coherent policy in relation to the management of Commonwealth records. Such a policy will provide for arrangements to cover the whole of the Public Service in relation to which agencies have defined roles and objectives as users and managers. It will also provide a necessary means of assisting the public towards an understanding of what can and, equally important, cannot be achieved in managing so vast and diverse a body of records. Openness about records as a commodity is seen as an essential element in the growing degree of contact between the community and the agencies of the Government. The Bill also recognises that there must be an adequate system of public access to the records generated by Departments and Authorities, and should have the ability to deal with all categories of Commonwealth records since their creation.

At 30 June 1983, Australian Archives' holdings throughout Australia totalled 349,812 shelf metres of records, including 136,970 metres of permanent value material. During 1982–83, 1,762 official reference inquiries were received and 274,808 items were lent or returned by departments. Some 3,483 public reference inquiries were also received, and 41,255 items were consulted in the Search Rooms, and 129,417 items were consulted in the Repositories.

State government archives

State government archives, dating from the beginning of European settlement in 1788, are held, in the case of New South Wales, Tasmania and Victoria, by archives offices established in 1961, 1965 and 1973 respectively and in other States by the archives sections of State libraries.

Business and Labour Archives

The main collecting centres for business and labour records are the Archives of the Australian National University (ANU), the University of Melbourne, and the University of New England. The ANU Archives of Business and Labour and University of Melbourne archives in particular have strong collections covering a wide range of business activity. Each is notable for its collections in particular fields; the Australian National University for its holdings of records of pastoral companies; the University of Melbourne for its holdings of mining companies' records. Both hold large collections of records of trade unions. The University of New England archives concentrates on records of rural industries. The Universities of Wollongong and Newcastle Archives also collect business and labour records, mainly in respect of their regions.

Other archives

The Mitchell Library has been acquiring manuscript material since the early years of this century. More recently, the National Library, State libraries, some archives offices, a few public libraries and historical societies, the Australian Academy of Science, and the Australian War Memorial (which is also responsible for the custody and preservation of operational records of the armed services) have assembled important collections of private papers. Ecclesiastical archives have been set up by some of the churches and some firms have established their own archives services. State and local historical societies help to preserve regional, local and private historical material.

Botanical and zoological gardens

In addition to the State botanical and zoological gardens there are numerous privately-owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc. dedicated for public use which are preserved largely in their natural condition. Detailed information is given in each State Year Book.

The following is a summary of botanical gardens and major reserves in the Northern Territory, Australian Capital Territory and the Commonwealth Territory of Jervis Bay.

Northern Territory: The Darwin Botanical Gardens occupy 30 hectares and feature 12 hectares of tropical plants of both native and overseas origin. Two hectares are used for an amphitheatre and contain a number of native and exotic plants. The Gardens are controlled by the Darwin City Council. A $600,000 redevelopment program has recently commenced, which will include a rain forest, a typical top-end lagoon and a coastal salt-water development.

Australian Capital Territory: The National Botanic Gardens occupy a 44 hectare site on the lower slopes of Black Mountain in Canberra. It was officially opened in 1970 and comprises the largest living collection of Australian native plants with over 5,000 species in cultivation. The associated herbarium houses over 100,000 specimens. An annexe of approximately 78 hectares was established at Jervis Bay in 1951 to cultivate frost tender plants under more favourable conditions than those prevailing in Canberra, and to establish a collection of native plants representative of the flora of the Jervis Bay region. Education and horticultural research into native plants are important aspects of the Gardens activities.

During 1980-81, approval was given to extend the Gardens by 40.5 hectares adjacent to the present site. This extension which will enable a larger number of species to be cultivated, will be developed progressively over the next 10 years. A special garden and activity centre for disabled people interested in horticulture was completed as a major Commonwealth Government initiative for the International Year of Disabled Persons. The facility is known as the Banksia Centre.

The Tidbinbilla Nature Reserve (5,515 ha) is located 43 km south-west of Canberra. The Reserve includes much of the Tidbinbilla Valley which ranges from 762 metres above sea level to 1,325 metres at Tidbinbilla Peak, the highest peak of the Tidbinbilla Range which forms the western boundary of the Reserve. As a consequence of the valley topography many habitats are represented and plant and animal wildlife is diverse. A system of wildlife enclosures and waterfowl ponds, 56 kilometres of nature trails and a comprehensive information service is provided for approximately 180,000 visitors per annum.

The Gudgenby Nature Reserve (51,000 ha) occupies about 20% of the A.C.T. and contains an extensive tract of the wild highlands of south-eastern Australia. It covers the catchments of the Naas and Gudgenby Rivers and shares a common boundary with the Cotter River catchment (47,000 ha) in the A.C.T., and the magnificent Kosciusko National Park (520,000 ha) in neighbouring N.S.W.

The topography and landscapes of the Reserve, and consequently plant and animal communities, are extremely varied. Habitat ranges from grassland of the valley floors through woodland and mountain forest to sphagnum bogs, heath swamps and alpine woodland. Several high peaks rise to between 1,700 metres and 1,800 metres above sea level. Other features of importance include a series of Aboriginal rock paintings, the only ones known in the A.C.T.

The Black Mountain Reserve (521 ha) adjacent to Lake Burley Griffin, is a significant focal point in the Canberra landscape and an essential component of the 'mountain and lake' concept of the Canberra scene. Black Mountain Reserve is unique in its setting within the inner boundary of a National Capital. In addition to broad scale scenic attributes, the Reserve has a varied complex of flora and fauna and is used extensively for recreation and nature study.

The Jervis Bay Nature Reserve occupies two thirds (4,470 ha) of the Commonwealth Territory of Jervis Bay which lies on the south-east coast of Australia. The Reserve is characterised by a substantially natural landscape and outstanding coastal scenery, high cliffs, ocean and bay beaches, sand dunes, woodland, forest and heath. A small island and part of the unspoilt marine environment of

Jervis Bay and its foreshores are managed in sympathy with the Nature Reserve. Camping facilities are provided and are designed to complement the natural values of the area which attracts in the order of 400,000 visitors annually.

Management aims for all nature reserves in the A.C.T. and Territory of Jervis Bay are to:

- maintain natural ecosystems and landscapes and protect sites of prehistoric and historic significance;
- provide opportunities for recreational, scientific and educational use of these resources consistent with their protection.

RECREATION

The Department of Sport, Recreation and Tourism has responsibility in the national sphere for recreation, fitness and sports development.

All State governments have also established agencies with special responsibilities for recreation and sport. Increasing numbers of local government authorities are employing recreation workers who are responsible for planning the use of recreation facilities, and for devising recreation programs.

Sports development and assistance

The Sports Development Program administered by the Department of Sport, Recreation and Tourism, is the Commonwealth Government's major contribution to national sporting activities and national sporting bodies. In 1982–83, the Government provided $3.2 million under this program. Grants are allocated to national sporting organisations for a range of purposes including the employment of administrative and coaching personnel, assistance for national coaching projects, travel expenses for Australian teams competing overseas and assistance towards conducting international sporting events in Australia. The Commonwealth Government provided $200,000 to assist and encourage disabled people to participate in sport and recreation in 1982–83.

National Coaching Accreditation Scheme

The Australian Coaching Council (ACC), which is a national body representing sport through the Confederation of Australian Sport, the Australian Olympic Federation, and Commonwealth and State Governments, was established in July 1979 to co-ordinate the establishment of the Scheme which aims to increase the standard of coaching expertise in Australia and the performance levels of Australian athletes.

In 1982–83 the Commonwealth Government provided $40,000 from the Sports Development Program to assist with the development of the Scheme.

The Australian Coaching Council and its Technical Committee are serviced by the Department of Sport, Recreation and Tourism. The Council meets four times a year and the Committee, which examines applications for accreditation of national coaching schemes, meets as the work-load requires. Sixty-three national coaching schemes have received ACC approval. A further four schemes are under consideration by the Council.

Australian Institute of Sport *(See also Special Article, page 684)*

The Australian Institute of Sport (AIS) was established in 1980 to provide Australia's top level athletes with the opportunity to develop their sporting potential through first class coaching at international standard facilities and with access to sports science and sports medicine backup. It does this through the provision of scholarships to top sportspeople in eight sports—basketball, gymnastics, netball, soccer, swimming, tennis, track and field and weightlifting. Sportsmen and sportswomen attending the institute are also able to undertake secondary or tertiary education or obtain regular employment. The Institute was established as a private company limited by guarantee, incorporated in the A.C.T. The AIS Board of Management, appointed by the Minister responsible for sport is responsible for the long-term development of the Institute. At the end of June 1983, the AIS had a staff of fifty-three, comprising sixteen administrative staff, twenty-five sports coaches and twelve sports science/sports medicine personnel. The Institute is located at the National Sports Centre at Bruce in the A.C.T. In 1982–83 the Government provided $4,504,700 to cover the operational and development costs of the Institute. In addition to the resident sports program, the Institute administers the National Training Centre Program, introduced in December 1982 to give primarily non-Institute sports an opportunity to use the AIS facilities, resources and expertise for national selection trials and team training, squad training, talent development programs, coaches' seminars and workshops for sports officials. Another program, introduced in October 1982, provides ten scholarships per year to the AIS for athletes and coaches from developing Commonwealth countries.

International Standard Sports Facilities

In the 1980–81 to 1982–83 triennium the Commonwealth entered into commitments totalling $25 million with the States/Territories for the development of international standard sports facilities. The aim of the program is to encourage the States and Territories to construct a range of sporting facilities to give Australian athletes the opportunity to train and compete on a similar basis to their overseas counterparts and enable Australia to be more successful in attracting international competition. Funds available under this program are provided on a dollar for dollar basis for capital expenditure for those facilities which have been accorded the highest priority in the various States and Territories. To August 1983 the Government had agreed to provide funds to New South Wales for the development of an indoor sports centre; to Victoria for the development of facilities for hockey, equestrian sports, the upgrading of Olympic Park and Sandown Motor Racing Circuit; to Queensland for the upgrading of Belmont Rifle Range and the QEII Stadium and for the installation of lighting at the Chandler Velodrome; to South Australia for the construction of an indoor aquatic centre and a speed roller skating circuit; to Western Australia for a baseball centre and an equestrian centre; to Tasmania for the development of an indoor velodrome, a rowing centre and a baseball centre; and to the Northern Territory for the construction of an indoor sports centre.

1982 Commonwealth Games

The XII Commonwealth Games, held in Brisbane from 30 September to 9 October 1982, was the most significant sporting event held in Australia for twenty years. Participants from Commonwealth countries competed in the sports of archery, athletics, badminton, bowls, boxing, cycling, shooting, swimming, weightlifting and wrestling.

Responsibility for the Australian team's preparation for the Games rested with the Australian Commonwealth Games Association, while the organisation and conduct of the event was entrusted to the XII Commonwealth Games Australia (1982) Foundation Ltd.

The costs of staging the Games were met by the three tiers of government, i.e. Local, State and Commonwealth and from corporate funding obtained through the Games Foundation's marketing program. The Commonwealth's contribution to the Games was approximately $40 million, provided towards facility development, host broadcaster services, essential Games operations and team preparation.

Youth affairs

The Office of Youth Affairs, a Branch of the Department of Employment and Industrial Relations, advises the Minister on youth policy.

The primary functions of the Office are:

- to seek greater co-ordination and consultation between Commonwealth Departments, State and Local Governments and non-government agencies in relation to policies and programs affecting young people;
- to undertake research and information programs;
- to advise on youth needs and aspirations; and
- to develop channels for better communication between young people and government.

The Office acts as secretariat to the National Youth Advisory Group and convenes meetings with State government youth agencies and peak organisations of national voluntary youth organisations.

A register of young people who wish to serve on Government advisory and consultative bodies is kept by the Office and applicants up to 30 years of age may submit their personal details for inclusion in the register. To date young people have been appointed to a number of such bodies, including the Bureau of Labour Market Research Advisory Committee, the National Training Council, the Community Youth Support Scheme State Advisory Committees, the Sports Advisory Council, the Australian Ethnic Affairs Advisory Council and the Theatre Board of the Australia Council.

To facilitate the development of activities for the United Nations International Youth Year—1985—a Secretariat has been established to co-ordinate plans and ideas for the Year and consult with relevant agencies on how activities for the Year might best be co-ordinated and organised.

The Program of Assistance to Youth Organisations provides grants to national youth organisations to enable them to extend their services to more young people, and to broaden the direct involvement of young people in management and organisational decision making. A total of $640,000 was allocated to the Program during 1982–83 from which grants were made to 32 national youth organisations.

The International Youth Exchange Program was introduced in September 1980 and consists of:

- a Government to Government sponsored program of international youth exchanges in the Asian/Pacific region; and
- assistance to Australian-based voluntary agencies in promoting and negotiating exchanges.

Tourism

The Department of Sport, Recreation and Tourism is involved in a range of policy, administrative and consultative activities designed to encourage the efficient development of tourism in Australia in co-operation with the industry and with Commonwealth and State/Territory government departments. Major functions of the department include: formulation of policy proposals, transmission of advice to the Minister on industry issues, administration of the *Australian Tourist Commission Act*, conduct of research into the tourist and travel industries, provision of secretariat support to the Tourist Ministers' Council, the Australian Standing Committee on Tourism and the Travel and Tourist Industry Advisory Council and liaison with international tourism organisations.

Australia has been a full member of the World Tourism Organization (WTO) since September 1979. The WTO is an intergovernmental technical body examining all sectors of tourism on a world wide basis. Australia is Chairman of the Organization's Regional Commission for East Asia and the Pacific (CAP).

Australia is also a member of the Organisation for Economic Co-operation and Development Tourism Committee. The Committee promotes co-operation between member countries in the field of tourism, through examination of issues such as transportation, energy, accommodation, employment, investment and profitability in the light of changing economic conditions.

Australian Tourist Commission

The Australian Tourist Commission was established in 1967. It is a statutory body whose purpose is to encourage travel to and within Australia. It has ten commissioners including representatives of the Commonwealth, State and Territory governments and the tourist industry. Its 1983–84 budget is $17.5 million.

The Commission engages in a wide variety of marketing activities including consumer and trade advertising, industry seminars and familiarisation visits for travel agents, journalists and photographers. The Commission has its head office in Melbourne and branch offices in Sydney, Auckland, London, Frankfurt, New York, Los Angeles, Tokyo and Singapore.

Tourist Accommodation

Census of Retail Establishments and Selected Service Establishments. Data relating to accommodation establishments have been collected as part of the 1979–80 census. For detailed statistics *see Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, Australia, 1979–80* (8622.0). (*See* also Chapter 17, Manufacturing and Internal Trade).

Surveys of Tourist Accommodation Establishments. Quarterly accommodation surveys were commenced in the September Quarter 1975 and data published from these surveys include room occupancy, bed occupancy and takings from accommodation.

The main purpose of the surveys of tourist accommodation establishments is to measure the utilisation of available tourist accommodation. For detailed statistics from the survey *see Tourist Accommodation, Australia* (8635.0).

TOURIST ACCOMMODATION (*a*)

		March quarter 1982	*June quarter 1982*	*September quarter 1982*	*December quarter 1982*	*March quarter 1983*	*June quarter 1983*
LICENSED HOTELS WITH FACILITIES(*b*)							
Establishments	Number	1,027	1,037	1,035	1,050	1,055	1,046
Guest rooms	"	27,741	27,853	29,342	30,775	31,369	31,468
Bed spaces	"	65,407	65,878	69,834	74,015	75,467	76,012
Room occupancy rates	%	53.8	51.6	52.1	48.6	48.6	47.2
Bed occupancy rates	%	35.4	33.2	33.6	30.5	31.4	29.7
Gross takings from accommodation	$'000	54,761	53,500	60,892	61,718	62,643	61,644
MOTELS, ETC.(*b*)							
Establishments	Number	2,499	2,521	2,643	2,677	2,695	2,722
Guest rooms	"	63,729	64,534	66,932	68,860	69,176	69,968
Bed spaces	"	186,525	188,906	196,442	202,246	203,571	205,457
Room occupancy rates	%	60.2	57.4	57.9	52.4	54.2	53.3
Bed occupancy rates	%	38.5	35.3	35.7	31.8	34.7	32.8
Gross takings from accommodation	$'000	117,461	115,835	125,727	116,040	122,037	121,017
TOTAL							
Establishments	Number	3,526	3,558	3,678	3,727	3,750	3,768
Guest rooms	"	91,470	92,387	96,274	99,635	100,545	101,436
Bed spaces	"	251,932	254,784	266,276	276,261	279,038	281,469
Room occupancy rates	%	58.3	55.7	56.2	51.3	52.4	51.4
Bed occupancy rates	%	37.7	34.8	35.2	31.4	33.8	31.3
Gross takings from accommodation	$'000	172,222	169,334	186,619	177,758	184,680	182,661
CARAVAN PARKS(*b*)							
Establishments	Number	1,855	1,912	1,904	1,918	1,922	1,856
Powered sites	"	135,629	139,626	138,765	140,735	141,741	136,786
Unpowered sites	"	58,572	60,072	60,190	61,244	62,174	59,799
Cabins, flats, etc.	"	3,639	3,676	3,696	3,839	3,749	3,631
Total capacity	"	*197,840*	*203,374*	*202,651*	*205,818*	*207,664*	*200,216*
Site occupancy rates	%	32.4	23.8	22.3	25.3	32.0	21.6
Gross takings from accommodation	$'000	32,295	25,828	25,881	30,211	36,587	25,497

(*a*) For the purposes of this survey, a tourist accomodation establishment is defined as an establishment which predominantly provides short term accommodation (i.e. for periods of less than two months) available to the general public. (*b*) For definitions *see Tourist Accommodation, Australia* (8635.0).

TRAVEL

The following pages contain statistics of internal travel and travel to and from Australia, together with some descriptive matter.

Internal travel

Domestic Tourism Monitor (DTM)

In 1977 the Australian Standing Committee on Tourism (ASCOT), which is a joint State, Territory and Commonwealth body with responsibility for advising Commonwealth and State/Territory Tourism Ministers, commissioned the Roy Morgan Research Centre to conduct a survey of domestic tourism. The survey, known as the Domestic Tourism Monitor, began in April 1978 and is in its sixth year. State and Territory tourism authorities also provide details relating to their areas.

Approximately 1,100 householders throughout Australia are being interviewed each weekend. For all domestic trips taken by Australian households of at least one night to destinations at least 40 km from the respondent's place of residence, details are recorded of the purpose of the trip, mode of transport, type of accommodation, length of stay and main destination.

This type of information is cross-classified according to various characteristics such as age, sex, occupation, place of residence and income. Data are also available on the characteristics of non-travellers.

Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or abroad; this classification distinguishes between long-term and short-term movement.

Statistics of permanent and long-term movement are shown in Chapter 6, Demography.

Statistics of short-term arrivals and departures which are in the nature of travel statistics are given below.

Short-term movement is defined as comprising visitor arrivals and Australian resident departures where the intention of staying in Australia or abroad is for a period of less than twelve months, together with departures of visitors and returns of Australian residents who have stayed in Australia or abroad for less than twelve months.

Short-term movement excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers) or who change flights without leaving the airport's transit area; passengers on pleasure cruises commencing and finishing in Australia; and all crew. However, it includes persons who pass through the Customs Barrier and declare the purpose of their visit to Australia to be 'in transit'. Short-term visitors are more numerous than long-term visitors and have come to be regarded as 'tourists' by many users of the statistics.

SUMMARY OF SHORT-TERM TRAVELLER STATISTICS

	Overseas visitors		*Australian residents*	
	Arrivals in Australia	*Departures from Australia*	*Departures from Australia*	*Arrivals in Australia*
Annual average—				
1966–70	297,275	308,321	258,824	259,700
1971–75	475,925	479,015	647,608	631,446
1976–80	684,729	655,413	1,077,332	1,062,105
Year—				
1977	563,281	540,943	971,253	973,677
1978	630,594	597,123	1,062,234	1,029,482
1979	793,345	752,440	1,175,769	1,144,334
1980	904,558	874,090	1,203,603	1,194,768
1981	936,727	900,376	1,217,299	1,181,387
1982	954,674	921,459	1,286,908	1,259,643

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These characteristics are: sex, age, marital status, country of citizenship, country of birth, occupation, intended or actual length of stay, purpose of journey, mode of transport, country of residence or where most time was or will be spent, country of embarkation or disembarkation, State of residence or where most time was or will be spent, and State of embarkation or disembarkation.

The categories shown in the previous table are cross-classified by various characteristics listed above and resulting statistics are shown in considerable detail in quarterly and annual publications. Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of overseas visitors and the departure of Australian residents.

SHORT-TERM MOVEMENT: ARRIVALS AND DEPARTURES OF OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS BY MONTH OF ARRIVAL OR DEPARTURE, AUSTRALIA, 1982

(Persons)

	Overseas visitors		*Australian residents*	
Month	*Arriving*	*Departing*	*Departing*	*Returning*
January	79,228	106,531	91,690	150,623
February	79,209	78,608	78,778	86,704
March	84,492	85,834	114,745	89,357
April	82,686	79,839	100,724	91,849
May	61,727	81,058	113,300	101,583
June	63,602	59,109	122,773	98,533
July	83,623	66,989	117,945	112,099
August	75,743	78,523	122,211	109,236
September	66,074	66,593	102,902	130,887
October	78,166	77,439	85,252	120,283
November	88,522	72,572	92,804	97,421
December	111,602	68,364	143,785	71,070
Total	**954,674**	**921,459**	**1,286,908**	**1,259,643**
Sea travellers as a percentage of Total	0.47	0.32	0.47	0.39

SHORT-TERM MOVEMENT—DEPARTURES OF AUSTRALIAN RESIDENTS: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1982 (a)

(Persons)

	Main purpose of journey							
Intended length of stay	*Student vacation*	*Visiting relatives*	*Holiday, accompanying business traveller*	*Convention*	*Business*	*Employment*	*Other and not stated*	*Total*
Under 1 week	283	3,916	17,937	2,247	26,239	1,818	4,171	56,611
1 week and under 2 weeks	3,459	15,086	186,074	11,699	34,980	1,234	9,284	261,816
2 weeks and under 3 weeks	4,079	22,468	209,711	5,620	26,526	1,636	9,923	279,964
3 weeks and under 1 month	2,128	25,752	93,684	3,384	16,294	852	5,197	147,291
1 month and under 2 months	4,463	68,876	118,416	3,877	24,490	2,475	9,932	232,528
2 months and under 3 months	2,984	39,651	55,002	979	7,453	1,346	5,065	112,480
3 months and under 6 months	2,319	37,874	47,626	479	5,937	2,373	6,319	102,926
6 months and under 9 months	704	12,324	19,338	*	2,555	3,350	3,807	42,087
9 months and under 12 months	642	6,987	13,071	*	2,101	4,933	6,231	34,041
Not definite, not stated	386	2,957	8,839	420	1,441	554	2,569	17,164
Total	**21,447**	**235,891**	**769,698**	**28,790**	**148,014**	**20,571**	**62,497**	**1,286,908**

(a) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

SHORT-TERM MOVEMENT—ARRIVALS OF OVERSEAS VISITORS: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1982 (a)

(Persons)

	Main purpose of journey							
Intended length of stay	*In transit*	*Visiting relatives*	*Holiday, accompanying business traveller*	*Convention*	*Business*	*Employment*	*Other and not stated*	*Total*
Under 1 week	64,211	8,398	67,418	2,486	39,507	1,159	7,101	190,281
1 week and under 2 weeks	136	21,856	84,855	5,493	39,111	373	7,286	159,110
2 weeks and under 3 weeks	*	35,115	67,847	3,037	21,825	410	7,232	135,494
3 weeks and under 1 month	*	37,413	36,935	998	6,364	294	3,568	85,576
1 month and under 2 months	*	90,427	60,888	944	11,092	1,100	7,449	171,921
2 months and under 3 months	*	34,735	20,070	172	3,832	989	4,708	64,517
3 months and under 6 months	*	34,932	23,351	*	3,679	2,643	7,248	71,934
6 months and under 9 months	*	14,871	13,648	*	1,387	4,000	4,020	37,948
9 months and under 12 months	*	3,993	8,763	*	1,368	7,031	7,780	28,958
Not definite, not stated	*	2,477	3,011	136	1,077	350	1,884	8,935
Total	**64,446**	**284,217**	**386,786**	**13,357**	**129,242**	**18,350**	**58,275**	**954,674**

(a) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

The average intended length of stay abroad of Australian residents departing in 1982 for short-term visits abroad was 53 days. The average intended length of stay in Australia by short-term visitors from overseas was 52 days. Of course, statistics for Australian residents refer to their total time away from Australia; for overseas visitors they refer only to the Australian portions of their trips.

In the case of both Australian residents departing and overseas visitors arriving, the most common reason for visit was 'holiday', followed by 'visiting relatives' and 'business' as the second and third most common reasons.

SHORT-TERM MOVEMENT: ARRIVALS OF OVERSEAS VISITORS AND DEPARTURES OF AUSTRALIAN RESIDENTS BY COUNTRY OF RESIDENCE/INTENDED STAY AND INTENDED LENGTH OF STAY, AUSTRALIA, 1982 (b)

	Arrivals of overseas visitors—intended length of stay						*Departures of Australian residents—intended length of stay*				
Country of residence (visitors) and country of intended stay (residents)	*Under 1 week*	*1 week and under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Not definite, not stated, etc.*	*Total*	*Under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Not definite, not stated, etc.*	*Total*
Africa											
South Africa	1,765	3,778	4,324	1,593	*	11,523	2,367	4,490	1,423	*	8,342
Other	786	1,867	2,167	1,283	132	6,233	1,885	3,280	2,262	130	7,554
Total, Africa	*2,551*	*5,645*	*6,491*	*2,876*	*193*	*17,756*	*4,252*	*7,770*	*3,685*	*190*	*15,896*
America											
Canada	3,685	12,387	8,882	7,271	222	32,447	3,063	7,796	3,045	280	14,184
U.S. America	33,260	61,264	21,209	9,513	739	125,985	87,159	54,071	17,056	2,002	160,288
Other	1,105	1,440	1,123	1,513	181	5,362	1,340	3,526	2,404	142	7,412
Total, America	*38,050*	*75,091*	*31,214*	*18,297*	*1,142*	*163,794*	*91,562*	*65,393*	*22,505*	*2,424*	*181,884*
Asia											
Hong Kong	2,897	10,809	4,331	2,110	333	20,480	62,515	6,939	3,025	870	73,349
India	1,335	1,592	1,321	1,110	*	5,414	2,950	6,363	2,338	160	11,810
Indonesia	4,630	6,341	3,094	1,317	204	15,585	68,879	7,901	2,732	968	86,481
Japan	33,254	20,433	2,844	3,086	771	60,389	18,143	4,189	1,468	246	24,047
Malaysia	2,335	10,095	5,677	4,583	240	22,930	23,972	8,973	3,360	401	36,708
Philippines	1,763	2,019	1,756	1,399	108	7,044	20,567	7,809	1,657	250	30,282
Singapore	4,941	12,796	4,527	1,958	177	24,399	59,703	7,732	2,831	842	71,108
Thailand	995	2,317	1,206	777	*	5,375	12,288	2,757	1,070	210	16,325
Other and unspecified	5,186	7,134	5,141	3,379	424	21,266	16,710	13,649	11,166	791	42,315
Total, Asia	*57,336*	*73,536*	*29,897*	*19,719*	*2,393*	*182,882*	*285,727*	*66,312*	*29,646*	*4,738*	*386,423*
Europe--											
France	2,135	3,181	3,109	1,751	*	10,248	2,333	5,866	2,528	131	10,857
Germany(*a*)	4,539	9,629	16,792	7,541	400	38,900	4,137	11,097	5,139	343	20,716
Greece	459	504	1,368	2,505	132	4,967	2,087	8,497	16,135	666	27,385
Italy	1,237	2,820	4,474	3,306	256	12,092	3,688	16,730	14,136	820	35,374
Netherlands	1,460	3,717	7,918	3,508	156	16,758	1,684	6,700	3,434	160	11,978
Switzerland	1,339	2,533	3,716	3,047	124	10,759	1,248	2,890	964	110	5,212
U.K. and Ireland	14,745	45,648	76,146	39,994	1,251	177,782	19,901	88,144	45,206	1,918	155,168
Yugoslavia	136	360	1,580	2,407	*	4,562	964	5,882	7,491	220	14,557
Other and unspecified	3,733	6,088	7,238	6,788	421	24,276	3,227	15,023	11,915	553	30,719
Total, Europe	*29,783*	*74,480*	*122,341*	*70,847*	*2,893*	*300,344*	*39,269*	*160,829*	*106,948*	*4,921*	*311,966*
Oceania											
Fiji	3,352	3,612	3,258	1,600	180	12,002	85,148	3,078	1,009	1,016	90,253
New Caledonia	2,672	3,068	2,506	575	182	9,001	20,044	500	253	347	21,145
New Zealand	46,067	133,602	32,101	19,953	1,533	233,256	170,792	32,829	7,491	2,401	213,514
Papua New Guinea	7,864	8,277	6,155	2,912	263	25,470	13,990	4,772	5,843	492	25,095
Other	2,404	2,284	1,905	1,504	108	8,207	32,195	2,416	1,078	451	36,138
Total, Oceania	*62,359*	*150,843*	*45,925*	*26,544*	*2,266*	*287,936*	*322,169*	*43,595*	*15,674*	*4,707*	*386,145*
Other	201	584	572	556	*	1,962	2,703	1,109	596	185	4,594
Total	**190,281**	**380,180**	**236,438**	**138,840**	**8,935**	**954,674**	**745,682**	**345,008**	**179,054**	**17,164**	**1,286,908**

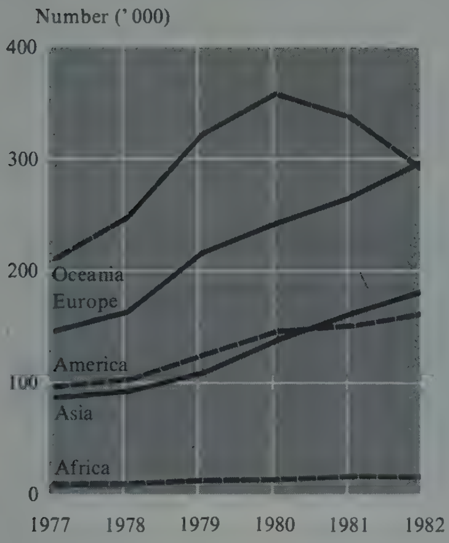
(*a*) Comprises the German Democratic Republic and the Federal Republic of Germany. (*b*) Asterisk (*) denotes that figures are subject to sampling variability too high for most practical purposes.

Survey of International Visitors (IVS)

A survey on the travel behaviour and attitudes of international visitors to Australia was commissioned by the Australian Tourist Commission, and conducted by the Roy Morgan Research Centre, for the years 1979-80 and 1981. Commencing in 1983 the survey is being conducted on an annual basis.

Details contained in the survey include the arrival statistics, profile, itinerary, trip satisfaction and expenditure of short term visitors to Australia (defined as foreign residents staying in Australia for a period of less than twelve months).

VISITOR ARRIVALS, SHORT TERM, BY USUAL RESIDENCE, 1977 TO 1982



RESIDENT DEPARTURES, SHORT TERM, BY REGION OF INTENDED STAY, 1977 TO 1982

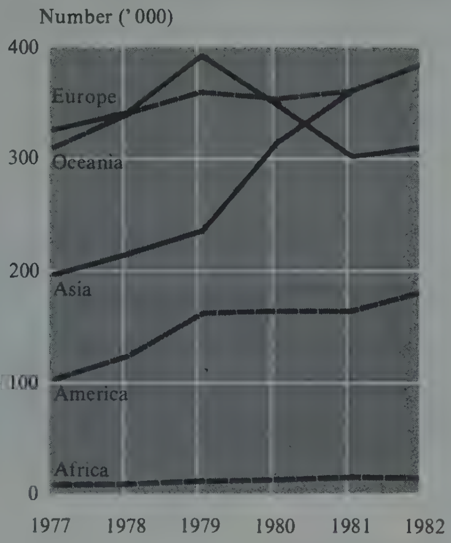


PLATE 50

AUSTRALIAN INSTITUTE OF SPORT

(This article has been written with information obtained from the Australian Institute of Sport)

Introduction

The Government established the Australian Institute of Sport (AIS) at the National Sports Centre in Canberra in January 1981. Canberra, the National Capital, is a modern garden city of light and space and as such provides an ideal location for an establishment such as an institute of sport.

The Institute aims to provide Australian athletes with:

- A very high level of coaching and intensive training, together with attractive educational opportunities and ancillary benefits;
- World class facilities and equipment with sports medicine and sports science back-ups; and
- Adequate domestic and overseas travel to enable them to participate in necessary high level competitions.

Prior to the establishment of the AIS, most of Australia's leading and promising athletes lacked the opportunity to train under top level coaches or to receive assistance with their travel to important competitions. Also, they lacked the use of satisfactory facilities and equipment. These deficiencies were most apparent with athletes living in country areas who usually trained in isolation and had little access to up-to-date training methods and to the sharing of ideas and experiences. Many Australian athletes had to choose between advancing their sport or pursuing a career. As a result, a large proportion of leading and promising athletes gave up training and competition, while others left Australia to further their sporting activities by gaining access to up-to-date opportunities available in the United States of America. Also Australia lagged behind many other countries in the field of sports medicine and sports science.

The Institute

Presently 200 of Australia's elite young sports people are training at the institute under 26 world class coaches.

These athletes are living at the Australian National University and are either attending university, college, high school, or are working while training at the Institute.

Scholarships have been provided for all 200 students and it is envisaged that there will eventually be 300 athletes attending the Institute.

The eight sports presently represented at the Institute are: athletics, basketball, gymnastics, netball, soccer, swimming, tennis and weight lifting.

As part of the Institute's decentralisation program, men's and women's field hockey becomes the ninth sport discipline to enter the AIS arena, at Perth, Western Australia, in February 1984.

The Institute is managed by a Board of Management chaired by Mr Kevan Gosper. Board Members include Professor John Bloomfield (Deputy Chairman), Mr John Cheadle, Dr John A. Daly, Mr Paul Brettell, Mr Bruce MacDonald, Mr Mike Wenden, Mr Geoff Pollard and Ms Libby Darlison.

Facilities

During the first year of the Institute's operation (1981) athletes used the facilities of the National Sports Centre which consisted of a track and field stadium, an indoor sports centre, and outdoor tennis and netball courts.

Over the 1982-83 period the Institute has seen the building and opening of new world class facilities including:

- a gymnastics training hall
- an indoor tennis hall (4 courts)
- an aquatic centre with an 8-lane 50 metre pool
- a short sprint 25 metre pool.

1984 sees the opening of:

- an indoor basketball/netball facility
- a weight lifting hall and theatrette
- an indoor soccer training hall and outdoor synthetic pitch.

Selection

Scholarships are advertised nationally, inviting applications from athletes who have obtained a certain level of performance in any of the eight sport disciplines.

After consultation between the Head Coaches at the AIS and the national body controlling each sport, successful athletes are advised of their scholarships in December and arrive in January the following year to pursue their athletic goals.

PLATE 51

Track and field stadium, National Sports Centre, Canberra

Australian Information Service

Scholarships

The Institute offers either full or part time scholarships to successful athletes. The scholarships comprise the following:

Full Scholarship:

- Board and quarters
- Travel to and from Canberra
- Education expenses to the value of $250
- Travel in Canberra (bus pass)
- Free medical supervision

Part Scholarship:

- Board and quarters
- Free medical supervision

All athletes are entitled to top class coaching, world class facilities, competition and training gear and equipment, laundering of training and competition gear, competition costs (interstate and overseas) and all back-up services (e.g. administrative and sports science).

Associated Activities

Education

The AIS provides attractive educational opportunities in cooperation with the following institutions:

The Australian National University
Canberra College of Advanced Education
Bruce College of Technical and Further Education
Canberra College of Technical and Further Education
Dickson College
Lyneham High School.

Billeting

Scholarship holders under the age of 16 years are placed with Canberra families as close as possible to the AIS.

Married Athletes

Married athletes receive a rent subsidy and find their own accommodation. Consideration is also given to requests by senior un-married athletes who wish to find their own accommodation.

Marketing of the Australian Institute of Sport

Although funds for the Australian Institute of Sport capital and yearly running costs are provided by the Federal Government, the AIS still needs corporate involvement. The Institute is seeking to finance up to 10% of yearly running costs through a corporate marketing program which gives companies, large and small, an opportunity to become involved with the Australian Institute of Sport.

The program offers companies the chance to sponsor Institute teams or individuals in return for the benefit of having their product publicised in various ways by Australia's top atheletes (see details below).

Companies can become involved with the Australian Institute of Sport in a number of ways. The marketing program has been devised to offer opportunities in the following areas:

Sponsorship of Institute Teams

There are a number of teams at the Australian Institute of Sport which require sponsorship. The company can gain benefit in the following ways:

- Teams wearing company logo on their competition tracksuits and, in some cases, clothing
- Advertising on team brochures
- Use of the AIS symbol for promotional activity
- Editorial mention in newsletters and reports
- AIS hospitality and presentations
- By Government and public relations opportunities

Sponsorship of one of the Institute teams is $30,000 per year.

Partial Subsidising of Scholarships

It presently costs $18,500 to keep an athlete at the Institute for one year. The Australian Institute of Sport is looking for companies to provide $6,500 towards the cost of these scholarships. Scholarship can be presented to either a team or the Institute in general and will carry company identification.

Companies offering this contribution towards scholarship costs will also be promoted along similar lines to those sponsoring Institute teams.

THE FUTURE OF THE AUSTRALIAN INSTITUTE OF SPORT

The creation of the AIS has been a big step forward in the advancement of sport in Australia. The next step will be to develop the AIS substantially so that it is commensurate with other countries (there are 50 Institutes of Sport in West Germany, 3 in India, many in Eastern European countries—most of these are of a very high standard).

Government support for the AIS has ensured the Institute's future and the next few years will see exciting developments in Australian sport.

At the Commonwealth Games in Brisbane in 1982 the Institute athletes, as members of the Australian team, indicated just how profitable 18 months of intensive training and back-up can be. The Institute's athletes broke many Commonwealth and national records and contributed substantially to Australia's overall medal tally. The performance of Institute members Robert de Castella in the marathon and triple gold medalist Lisa Curry in the swimming events were memorable highlights of the Commonwealth Games.

Australia's big test in the international arena will undoubtedly be the Los Angeles Olympics this year and all Australians will keenly watch the results of these Games.

However, as the AIS has been established for only a few years, it would be unrealistic to expect Australian athletes at the Los Angeles Olympics to achieve world standard in the various sport disciplines and bring home a host of gold medals. It took West Germany 16 years before its athletes from their Institutes of Sport gained prominence at top class international competitions, and it would be too optimistic to expect Australian athletes to accomplish the same feat in some 3 years.

What will be achieved through the existence of the AIS, will be considerable improvements in Australia's world ranking and a host of "personal best" performances by Australia's athletes.

The Australian Institute of Sport will enable Australia to again become a force to be reckoned with in the international world of sport—thanks to the foresight and continued funding and support of the Australian Government and sponsors.

CHAPTER 27

THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; the Territory of Christmas Island; and the Territory of Ashmore and Cartier Islands.

Information on all Territories except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories can be found in Chapter 1 of this Year Book. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* (1306.7) and the *Australian Capital Territory Statistical Summary* (1307.8) issued by the ABS. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects.

THE NORTHERN TERRITORY

General description

The total area of the Northern Territory is 1,346,200 square kilometres.

The Northern Territory seat of Government is Darwin on the North Coast. The estimated resident population of the Darwin Statistical Division at 30 June 1982 was 60,923.

Northern Territory Self-Government

The Northern Territory was established as a self-governing territory by the *Northern Territory (Self-Government) Act* 1978 of the Commonwealth. Under that Act, the Commonwealth transferred most of its powers to the Government of the Northern Territory.

In all fields of transferred power, the Government is similar to that of the Australian States, with some differences in titles, for example there is an Administrator instead of a Governor and a Chief Minister instead of a Premier.

The Administrator, appointed by the Governor-General, has responsibility for administering the Government of the Northern Territory. The Administrator is advised by an Executive Council comprised of all Northern Territory Ministers, led by the Chief Minister. The Administrator acts with the advice of the Executive Council on all matters transferred to the Northern Territory. He acts with Commonwealth advice on matters not transferred.

The Legislative Assembly of the Northern Territory is the Northern Territory's Parliament. It has 19 Members, which are elected for a period of four years. A Speaker is elected by, and Ministers are appointed from, the Members of the Legislative Assembly. A Ministry of six is responsible for the administration of all transferred powers and acts through a number of departments and authorities, most of which are staffed by the Northern Territory Public Service.

Local Government was established in Darwin in 1957 and afterwards in regional centres. Municipal councils are elected by universal adult franchise, with elections at intervals of not more than three years. Provision has been made for a limited form of local government by smaller communities. There has been considerable interest in this provision, particularly in Aboriginal communities.

Development of Administration

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911.

From 1911 until 30 June 1978, the Commonwealth administered the Northern Territory under the provisions of the *Northern Territory (Administration) Act* 1910, as amended. The Act provided for an Administrator, appointed by the Governor-General, to administer the Northern Territory on behalf of the Commonwealth Government.

By amendment of the Act in 1947, a Legislative Council comprising seven official and six elected members, with the Administrator as President, was created to make laws for the peace, order and good government of the Northern Territory. Composition of the Legislative Council was changed by further amendment in 1959 to provide for six official members, three nominated non-official members and eight elected members, and for an Administrator's Council to advise the Administrator. The Act was further amended in 1974 to provide for a Legislative Assembly of 19 elected Members and for a Speaker to be one of those Members, elected by the Members.

Laws passed by the Assembly were presented to the Administrator for assent. The Administrator was required to reserve laws on specific subjects for the pleasure of the Governor-General who was empowered to assent, withhold his assent or refuse his assent in part to such laws, or to return them to the Assembly with recommended amendments.

On 1 January 1977, the Commonwealth Government began a program of transferring executive powers to the Legislative Assembly by amendment of the Northern Territory (Administration) Act. A separate Northern Territory Public Service was created and administrative powers were transferred. Positions of Executive Member were created under the Act. These Members exercised ministerial-type powers in respect of transferred matters such as policy, fire brigade, local government and correctional services. An Executive Council replaced the Administrator's Council.

On 1 July 1978, the Northern Territory (Self-Government) Act came into force and established the Northern Territory as a body politic under the Crown. This Act also provided for the appointment of an Administrator by the Governor-General. It created offices of Ministers of the Northern Territory who, together with the Administrator, comprise the Executive Council of the Northern Territory. A Northern Territory Government, comprised of Ministers of the Northern Territory, was established with full responsibility for a range of state-type transferred powers administered through a Northern Territory Public Service and a Treasury. A Northern Territory flag was raised for the first time on 1 July 1978, the date upon which the Northern Territory became self-governing.

Major matters not transferred on 1 July 1978 were the mining of uranium and other prescribed substances, Aboriginal land matters, health, education and the Supreme Court. Powers in respect of health, education and the Supreme Court were progressively transferred from the Commonwealth to the Northern Territory Government during 1979.

At the end of 1979, the only major powers retained by the Commonwealth in the Northern Territory were those relating to rights in respect of Aboriginal land and the mining of uranium and other prescribed substances. Since the end of 1979, the Northern Territory, although remaining a Territory of the Commonwealth and still subject to Commonwealth laws made under Section 122 of the Constitution, is in most respects a self-governing Territory.

The Northern Territory is represented in the Parliaments of the Commonwealth by one Member in the House of Representatives and two Senators, whose terms of office coincide with that of the Member in the House of Representatives.

Physical geography

The Territory is within the torrid zone, with the exception of a strip about 300 kilometres wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 30 metres. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of 6,200 kilometres is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland, the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east-west trend.

Climate, fauna and flora

There are two main climatic divisions: the wet season, November to April; and the dry season, May to October. The changes of weather are uniform and regular. Nearly all the rainfall occurs in the summer months.

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, freshwater tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of freshwater fish and littoral Mollusca. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome in the 'top end', particularly in the wet season. Buffaloes exist in large herds on the northern coastal plains. Most types of native fauna are protected.

The vegetation is north Australian in type, but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine (which is termite resistant), ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland, particularly on the Barkly Tablelands and parts of the Victoria River district, there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area carries mainly spinifex grass and low scrub. The plains of the Alice Springs district carry chiefly an acacia scrub known as mulga, spinifex and other sparse grasses. The principal families represented in the interior are *Gramineae, Chenopodiaceae, Compositae* and *Mimosaceae*.

Water

The Northern Territory Government provides water and wastewater facilities in main centres including Darwin, Alice Springs, Tennant Creek, Katherine, Adelaide River, Batchelor, Pine Creek and many Aboriginal communities. Piped water is available in a number of small settlements including Mataranka, Larrimah, Daly Waters, Elliott, Ti Tree and Finke.

Darwin is served by the Darwin River Dam some 70 kilometres from the city. The earth rockfill dam was completed in 1972. It is 30 metres high with a crest length of 564 metres, has an active storage of 230 million cubic metres and a safe draft of 90 megalitres per day. A supplementary source, McMinn's borefield, is supplying up to 15 megalitres per day. Studies are also being carried out to identify future sources to meet the growing needs of the Darwin region.

Alice Springs has twenty production bores at Roe Creek. Tennant Creek has ten at Kelly Well and three at Cabbage Gum. Other communities are also supplied from groundwater sources. Katherine is supplied with treated water from the Katherine River in place of the hard water from the Tindall limestone aquifer.

Feasibility studies are in progress to assess the economic viability of multi-purpose dams at various sites on the Katherine River.

Soil conservation

The Conservation Commission of the Northern Territory administers soil conservation and control legislation, undertakes resource inventories to assess land capabilities and conducts soil erosion works on behalf of the Government and the private sectors.

Population

See also Chapter 6, Demography.

The estimated population of the Northern Territory at 30 June 1982, was 129,429 persons.

Aboriginal Affairs

Policy

The Government is committed to policies of Aboriginal self-management at all levels. Involvement of Aboriginals in delivery and planning programs, and in all stages of the development and implementation of policy is paramount.

The basis of the Government's approach is to secure for Aboriginals access to government services equal to that accorded other Australian citizens, together with additional services appropriate to Aboriginals' state of extreme disadvantage, and, in recognition of a community obligation deriving from Aboriginals' past dispossession and dispersal.

Legal status

As Australian citizens, Aboriginals are entitled to equality before the law. For the purpose of administering various programs designed to benefit Aboriginals, the Department of Aboriginal Affairs and other Commonwealth Government departments and agencies define an 'Aboriginal' or 'Torres Strait Islander' as a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.

Land and land rights

Aboriginals who are able to prove strong traditional links with unalienated Crown land may make a claim before the Aboriginal Land Commissioner, a judge of the Northern Territory Supreme Court.

The *Aboriginal Land Rights (Northern Territory) Act* 1976 requires the Land Commissioner, in hearing a claim, to consider a number of matters in addition to traditional ownership before making a recommendation to the Minister for Aboriginal Affairs. The Minister can then accept or reject the Aboriginal Land Commissioner's recommendations.

By 31 October 1983, 13 claims had been finalised. As a result 171,460 square kilometres have been granted (or are in the process of being granted) to Aboriginal Land Trusts. This will bring the total of Aboriginal freehold land in the Northern Territory to approximately 32% of the Territory. A further 7 claims have been heard by the Aboriginal Land Commissioner but not reported on, 6 hearings are in progress and 31 claims are yet to be heard.

Freehold titles to Aboriginal land are held by Aboriginal Land Trusts and the land is administered by Aboriginal Land Councils.

Minerals on Aboriginal land remain the property of the Crown. The Aboriginal Land Rights Act provides, however, that mineral exploration can only proceed with the approval of the appropriate land council which in turn must abide by the wishes of the traditional Aboriginal owners of the area concerned. This veto power can be overruled if the Governor-General, by Proclamation, declares that the national interest requires the grant of a mining interest, and neither House of Parliament disallows that Proclamation. Pre-existing mining interests were exempt from the requirement for Aboriginal consent. In all cases however, agreement must be reached on terms and conditions of mining and the Minister for Aboriginal Affairs is able to appoint an arbitrator in cases where Aboriginal consent is not required but a land council is unable or unwilling to reach agreement with a mining company.

Royalties from mining on Aboriginal land are paid into an Aboriginals Benefit Trust Account and are distributed to pay administrative expenses of land councils, to communities affected by mineral developments and, on the recommendation of an advisory committee, to Aboriginal communities of the Northern Territory generally. Control of uranium mining has been reserved by the Commonwealth and special arrangements have been made between the Commonwealth and the Northern Territory Governments in relation to payments in lieu of royalties.

Aboriginal communities are also being assisted to purchase land on the open market. An Aboriginal Land Fund Commission was established in 1974 for this purpose. This function was taken over on 1 July 1980 by the Aboriginal Development Commission which assists Aboriginal and Torres Strait Islander communities, groups and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

Community services and affairs

Government policy in the administration of Aboriginal affairs is to encourage State and Commonwealth departments and instrumentalities to provide services to Aboriginals as to other Australian citizens and to take special measures to ensure that these services are appropriate, accessible and reflect the variety of Aboriginal life styles. In line with the transfer of other functions to the Northern Territory Government on 1 July 1978, the Northern Territory Government has assumed responsibility for the provision of major services to Aboriginal communities including essential services such as water and power supply, health, education and support for local government. Subsequently, the Commonwealth has provided annual grants to the Northern Territory Government and to the Aboriginal Development Commission for housing programs for Aboriginals.

Special programs for Aboriginals

Attention is being given to changing the institutional character of Aboriginal communities in the Northern Territory. Support is designed to encourage and strengthen the capacity of Aboriginals to manage their own affairs, to increase their economic independence, and to reduce social handicaps facing them.

Government policy is to provide Aboriginal primary school children in Aboriginal communities with education in their own language as far as practicable. Bilingual education programs initiated in Northern Territory Aboriginal communities in 1973 have been expanded and are operating in several schools.

Aboriginal Legal Services operated by Aboriginals and supported by the Department of Aboriginal Affairs have been established on the initiative of Aboriginal groups in all States and the Northern Territory to ensure that Aboriginals have access to legal advice and are competently represented in the courts.

Production

See also the chapters dealing with particular subjects.

Land tenure

On 30 June 1981, 19,682,293 hectares were held under freehold title; 77,169,774 hectares under leasehold; 27,717 hectares under various licences; 13,247,036 hectares reserved for public purposes and for the benefit of Aboriginals; 82,334 hectares set aside for Government use; and 24,410,846 hectares unalienated. Land rent collected for the year 1980–81 amounted to $358,298.

Following the report of the Aboriginal Land Rights Commissioner in April 1974, the Commonwealth Government introduced the *Aboriginal Land Rights (N.T.) Act* 1976. This Act which commenced on Australia Day, 26 January 1977 gives traditional Aboriginals inalienable freehold title to former Aboriginal reserves and some other land, amounting to approximately 19 per cent of the Northern Territory, and provides a procedure for them to claim title to other areas of unalienated Crown Land.

With the commencement of the *Crown Lands Amendment Act (No. 3)* 1980 most existing leases in the Territory were automatically converted to freehold tenure making it the rule rather than the exception. Most Pastoral Leases and all Special Purposes Leases were excluded from automatic freeholding.

The various forms of lease or licence of lands are as follows:

Pastoral leases	—granted for periods not exceeding 50 years.
Crown leases (Term)	—granted for a term of years, and in majority of cases can be converted to freehold when developed.
Crown leases (Perpetual)	—granted in perpetuity.
Special purposes leases	—granted for a term of years or in perpetuity for purposes other than pastoral, agricultural or mining, or for private residential purposes within a town.
Grazing licences	—granted to graze stock on Crown Lands for periods not exceeding one year.
Occupation licences	—granted for manufacturing, industrial or any prescribed purposes for periods not exceeding five years.
Miscellaneous licences	—granted for periods not exceeding one year.

Pastoral and agricultural industries

Beef cattle production is the major rural industry in the Northern Territory. The beef industry has been characterised throughout its history by a slow rate of expansion due to the poor quality of native pastures in the Top End and unsatisfactory market outlets. Developments in pasture improvement and the use of adapted Zebu cross-cattle in the northern areas, the opening in 1963 of the export abattoirs in Katherine and Darwin, some improvement in disease control coupled with better management techniques, and various incentives and research programs introduced by the Government to encourage development of the pastoral industry have resulted in an increase in turnoff figures and value of production.

In the mid 1970s industry development suffered a major set-back due to a prolonged period of low export meat prices despite the upgraded export status given to Point Stuart Meatworks as well as the development of the live cattle export market in Malaysia. Over that period cattle numbers increased by approximately 400,000 head to 1.8 million, reflecting the high cost of mustering and cartage, which, together with the low returns resulted in non-profitability of cattle sold to market.

Between 1978 and 1980 the industry saw a dramatic upturn in prices by more than 300 per cent. Additional export abattoirs opened at Alice Springs and Tennant Creek. During 1981 beef cattle prices retreated from their historic high of 1980 and buffalo prices, due mainly to adverse exchange rate movement fell by up to 30 per cent.

Animal production has continued to be augmented by the buffalo meat industry. Development in the domestication of buffaloes continues on the sub-coastal plains properties, the 1981 estimated population being 6,300 out of an estimated feral buffalo population of 150,000. Buffalo meat exports of 2,752 tonnes in 1981 increased by two-thirds over the 1979 figure of 1,500 tonnes, the market changing quite radically. The American and Far East Markets of Hong Kong, Malaysia and Taiwan Province declined in favour of European markets, especially the Federal Republic of Germany and Scandinavia. Both the pig and poultry industries, unaffected by overseas marketing, have continued to expand.

In 1980 the Agricultural Development and Marketing Authority (ADMA) was established to encourage crop growing, diversification within the pastoral and agricultural industries, economies of scale and market development. ADMA has commenced development of seven farms for cropping in the Daly Basin, 250 kilometres from Darwin, and is managing a program of co-ordinated farm development on a commercial scale for the production of maize, sorghum, soya beans, peanuts and pastures for seed production, hay or grazing. A grain handling facility and a seed and fertilizer store in Katherine and one at Douglas-Daly have been established and horticultural marketing in the Darwin region is being promoted.

Continuing private investment in rural development is leading to greater pressures upon the Government for extension services and research. The work of CSIRO and the Department of Primary Production research stations and experimental farms is providing the basis for continuing rural development. As new knowledge is being gathered it will be followed by testing on farm scale.

The research institutions in existence in the Northern Territory are as follows:

Arid Zone Research Institute—Alice Springs. This institute zones research in the 'Centre' and studies the need to conserve valuable pastoral lands while achieving maximum productivity. Fields of work at the Institute include animal health, agriculture, horticulture, soil conservation, botany, animal production and range management.

Coastal Plains Research Station. The Station has 3 main roles: one as a regional station examining suitable pasture and animal production systems in the Coastal Plains/Darwin area; the second as the major centre for horticultural research and a third as a centre researching into buffalo production. Its efforts have been devoted to the animal breeding investigations, with some attention being paid to the development of improved pasture systems including establishment, maintenance and the reaction to various grazing rates. Breeding trials are being conducted with Brahmans and Africander cross-breeds, and Shorthorns. A small herd of cross-bred cattle (Shorthorn cows artificially inseminated from Bantang (Bali) Purebred Semen) has now been developed and the group transferred to private enterprise.

Victoria River Research Station. This is the only Government Experiment Station in the range-lands of the Northern Territory. Work is being undertaken on: cattle production management systems; evaluation of improved pastures; supplements; virus antibody survey; and range management studies.

Tortilla Flats Research Farm. The Research Farm is mainly concerned with rice production as it is representative of the Adelaide River plains land system which extends over 10,000 square kilometres. Work is being undertaken on testing new varieties, fertilizer trials, sowing techniques and weed control in rice bays.

Berrimah Research Farm. The work of this Farm has been mainly restricted to pasture and crop investigations; plant introduction; fruit, vegetable and weed control trials; and intensive animal studies.

Douglas-Daly Research Farm. With the advent of ADMA, cropping investigation under irrigation has resumed. The crops experimented with will include soy beans, peanuts, maize and mungbeans.

NORTHERN TERRITORY: NUMBER, AREA AND LAND UTILISATION OF AGRICULTURAL ESTABLISHMENTS

					Total	
	Number of agricultural establishments	*Area used for crops (a)*	*Area under sown pastures and grasses*	*Balance of area (b)*	*Area*	*Percentage of N.T. land area (134,620,000 hectares)*
				'000 hectares		
1977–78	297	0.8	112.3	75,410.0	75,523.1	56.0
1978–79	301	1.6	90.4	76,099.9	76,191.9	56.6
1979–80	346	1.8	99.0	78,066.8	78,167.7	58.1
1980–81	336	1.4	87.1	77,500.4	77,588.7	57.7
1981–82	300	2.0	56.0	77,078.0	77,136.0	57.3
1982–83p	286	3.5	62.6	75,896.7	75,962.8	56.4

(*a*) Excludes duplication on account of area double cropped. (*b*) Used for grazing, lying idle, fallow, etc.

NORTHERN TERRITORY: AGRICULTURAL STATISTICS

	Unit	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83p*
Livestock numbers—							
Cattle	'000	1,674.1	1,784.6	1,727.2	1,675.4	1,624.4	1,570.8
Domesticated buffaloes	'000	4.2	3.6	2.4	6.3	2.5	n.y.a.
Poultry	'000	183.5	200.3	180.1	169.9	206.4	166.5
Pigs	'000	3.2	3.1	2.3	3.2	2.5	1.3
Gross value of livestock slaughterings and other disposals—							
Cattle and calves	$'000	29,291	106,890	121,494	56,852	58,604	62,486
Poultry	$'000	633	633	880	1,314	497	1,314
Pigs	$'000	687	390	488	523	754	609
Gross value of livestock products—							
Dairy products	$'000	72	72	86	n.a.(a)	n.a.(a)	n.a.(a)
Eggs	$'000	1,300	1,292	1,395	1,757	2,500	2,500
Crops, Area—							
Sorghum (grain and feed)	Hectares	148	778	653	592	508	2,311
Hay	Hectares	66	251	367	8	–	38
Tree fruit	Hectares	15	15	16	15	17	28
Bananas	Hectares	14	12	13	13	19	80
Vegetables	Hectares	108	119	145	110	98	97
Pastures and grasses (hay, seed, green feed)	Hectares	1,591	2,123	1,693	2,974	5,886	n.y.a.
Total area used for crops (incl. pastures and grasses)	Hectares	2,407	3,697	3,549	4,410	7,867	n.y.a.
Crops, Production—							
Sorghum for grain	Tonnes	41	331	1,011	496	818	3,012
Hay	Tonnes	200	1,956	1,396	4	32	459
Bananas	Tonnes	89	124	101	60	87	n.y.a.
Pastures and grasses (hay, seed)	Tonnes	5,083	5,583	3,858	7,212	12,553	n.y.a.
Gross value of crops—							
Sorghum for grain	$'000	4	6	104	69	115	115
Fruit	$'000	60	220	85	75	80	87
Vegetables	$'000	421	588	332	297	231	231
Pastures and grasses	$'000	231	164	330	424	718	723
Total crops (incl. pastures and grasses)	$'000	1,194	1,125	1,098	1,908	2,133	2,261
Gross value of agriculture	$'000	33,177	110,402	125,441	62,355	64,500	69,170

(*a*) Not available for publication. Excluded from totals.

Mining

The value of mineral output continued its rapid growth of recent years from $437 million in 1980 to $466.1 million in 1982 and $625.6 million in calendar year 1982. The most important single factor to account for increases in value of production is the commencement of yellowcake production at Nabarlek and Ranger, as uranium accounts for some 52 per cent of the total value of minerals produced in 1982.

The principal mining areas are the Alligator Rivers Region for uranium, Gove Peninsula for bauxite/alumina production, Groote Eylandt for manganese and Tennant Creek for copper and gold.

NORTHERN TERRITORY: MINING ESTABLISHMENTS

		1979–80	*1980–81*	*1981–82*
Establishments operating end of June	No.	13	15	14
Average employment over whole year—persons (*a*)	No.	1,488	1,907	1,773
Wages and salaries	$m	28.1	39.7	37.4
Turnover	$m	189.6	305.5	329.3
Opening stocks at 30 June	$m	19.7	42.0	85.2
Closing stocks at 30 June	$m	38.7	81.7	133.7
Purchases, transfers in and selected expenses	$m	55.0	118.6	85.0
Value added (*b*)	$m	153.6	226.6	292.8
Fixed capital expenditure (*c*)	$m	186.1	194.3	58.8

(*a*) Includes working proprietors. (*b*) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses. Commencing with 1978–79, 'rent, leasing and hiring revenue' and 'rent, leasing and hiring expenses' have been included in the calculation of value added and its components 'turnover' and 'purchases, transfers in and selected expenses'. (*c*) Outlay on fixed tangible assets less disposals.

Petroleum and natural gas

Expenditure on offshore and onshore exploration was $34.2 million in 1981 and $45.3 million in 1982. In September 1983 a 148 km natural gas pipeline from the Palm Valley field to Alice Springs power station was completed. Appraisal testing took place on the Mereenie oil-field during 1981 and 1982.

Forestry

Forestry activities in the Northern Territory commenced in 1959 under the Forestry and Timber Bureau; later a State-type service was developed under the Department of the Northern Territory.

In July 1978, with the granting of self-government, forestry became the responsibility of the Territory Parks and Wildlife Commission, now the Conservation Commission of the Northern Territory.

Present activities fall into four main areas: Urban Forestry, Plantation Forestry, Native Forest Management and Conservation.

The Urban Forestry section is aimed at improving the urban environment throughout the Northern Territory through programs of park and street beautification and arid area species testing.

The Plantation Forestry section is predominantly based on plantation establishment on more favourable sites on Melville Island and is ultimately aimed at import replacement. The major species in use is *Pinus caribaea*, though early plantings were largely Cypress pine. A small pressure treatment plant providing treated round timber is operated by the Aborigines on nearby Bathurst Island.

Management of native forest is currently confined to the Murganella area of Arnhem Land where a policy of protection from fire has resulted in extensive regeneration of Cypress pine and native hardwoods, *Eucalyptus tetrodonta* and *E. nesophila*. Current research in this area is aimed at development of sound management prescriptions for treatment of this regeneration.

In its conservation role, the Conservation Commission has given emphasis to fire and ecological studies throughout the Territory together with seed collection, testing and propagation, and gene pool conservation of rare or unique species.

Fishing

After livestock production, fisheries is the second most valuable primary production industry in the Northern Territory. Prawn production, contributing over 80 per cent of the total value, is the major fishery. Barramundi is second, with the remainder mainly threadfin salmon, spanish mackerel, mud crabs, reef fish and bay lobsters.

Prawn and barramundi are heavily fished and measures have been taken to prevent over-exploitation. The Territory Government is encouraging development of under-utilised demersal and pelagic species (mainly fished by foreign vessels), reef fish, shark, crabs, scallops and squid. Foreign fishing ventures have involved the issue of up to 30 gill-netter licences and 60 pair trawler licences.

The Australian Government is encouraging Australians to participate in fisheries not being utilised and those being exploited by foreign vessels.

NORTHERN TERRITORY: PRINCIPAL FISHERIES

		1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
Prawns—							
Estimated gross weight of prawn catch . . .	tonnes	2,165	3,749	3,147	4,259	2,986	2,402
Gross value of prawns	$'000	8,100	17,000	14,900	17,067	15,250	15,691
Fish—							
Estimated live weight of fish catch	tonnes	1,451	1,576	1,352	1,634	1,897	1,694
Gross value of fish	$'000	1,900	2,334	1,791	2,267	2,944	2,794

Secondary industries

The types of secondary industries that have developed in the Northern Territory have been largely service industries based on demand from local markets, together with the processing of primary production for export including the processing of mined ores, prawns and beef. The isolation of the Northern Territory from the major population areas of Australia and the resultant high transportation costs make other than local market expansion difficult.

The extent of importation of commodities into the Northern Territory, significant underdeveloped raw resources and a growing population would suggest that potential exists for industrial expansion. Some see the proximity of South East Asian markets to Darwin as providing considerable future potential for export-orientated secondary industry development.

The following table shows results of the Manufacturing Censuses taken in respect of the years 1979–80 to 1981–82.

NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS

	Unit	*1979–80*	*1980–81*	*1981–82*
Establishments at 30 June	No.	101	98	106
Persons employed (*a*)	No.	2,512	2,651	2,489
Wages and salaries	$m	32.9	41.6	42.5
Turnover	$m	251.2	292.3	296.9
Opening stocks at 30 June	$m	45.2	48.8	83.1
Closing stocks at 30 June	$m	50.4	83.5	78.2
Purchases, transfers in and selected expenses	$m	179.4	230.6	230.9
Value added	$m	77.0	96.3	61.2

(*a*) Average over whole year. Includes working proprietors.

Tourism

Tourism is one of the Territory's major industries with direct earnings for 1981–82 estimated at $109 million.

A visitor growth rate of 5 per cent (based on an increase in indirect earnings for 1981 -82, 1982–83) continues to encourage investment in tourist facilities. These facilities include casinos in Darwin and Alice Springs and the Yulara Tourist Village at Uluru National Park. The latter, servicing Ayers Rock/Olgas showed tourist increases from 5,000 in 1961 to 87,000 in1982–83.

The Northern Territory Tourist Commission has a head office at Alice Springs and a regional office at Darwin. It operates government tourist bureaus in Adelaide, Melbourne, Sydney, Perth, Brisbane, Darwin and Alice Springs. Its budget for 1983–84 is $5.2 million.

National parks and reserves

There are 45 parks and reserves, covering about 48,000 square kilometres, under the care, control and management of the Conservation Commission of the Northern Territory. The Commission's functions include the preservation and protection of natural and historical features and the encouragement of public use and enjoyment of land set aside in the lands under its control.

Transport and communication

Railways

Passenger and freight train services commenced in December 1980 over the new 831 kilometre standard gauge (1,435 millimetres) Tarcoola—Alice Springs railway, construction of which commenced at Tarcoola, on the Trans-Australian Railway, in April 1975. It replaces a light pioneer narrow gauge (1,067 millimetres) line from Marree to Alice Springs, completed in 1929, and subject to frequent flooding and washaways. Train services on the North Australia Railway, from Darwin to Birdum, ceased on 30 June 1976, by direction of the Commonwealth Government.

Roads

The Stuart Highway is the principal north-south axis route for the Northern Territory connecting Alice Springs, Katherine, Tennant Creek and Darwin to Adelaide. The section Darwin—Alice Springs is 1,491 kilometres long and sealed over its full length. The section south of Alice Springs is sealed to the South Australian border, a distance of 293 kilometres.

The Barkly Highway is the principal route to and from Queensland via Mount Isa. It is 648 kilometres long and is sealed. Running approximately east-west, it connects to the Stuart Highway some 26 kilometres north of Tennant Creek.

The Victoria Highway, the principal access route to and from Western Australia via Kununurra, is 467 kilometres long and is sealed.

These highways are used to carry a variety of freight, including cattle, particularly between the railheads at Mount Isa and Alice Springs. They provide access to meatworks at Wyndham (Western Australia), Cloncurry (Queensland) and Katherine. In addition, they play a particularly important part in the Northern Territory economy through their association with the tourist industry.

The first program for upgrading the Stuart and Barkly Highways is complete, while the second program is nearing completion. Future works will be an ongoing program to bring these roads to National Highway Standards.

Shipping

Shipping services to Darwin are provided from the eastern states by the Australian National Line roll on-roll off vessel, the Townsville Trader, and from Western Australia by Stateships using two multi-purpose, roll on-roll off vessels (Pilbara and Koolinda). Both services are on a fortnightly basis. Tankers from Australian and overseas ports deliver oil products to Darwin. General cargo vessels from overseas ports also visit Darwin. The prawning and fishing industry accounts for a significant portion of the shipping entries into the port.

A regular shipping service which serves Aboriginal communities as well as the mining centres of Melville Bay (Gove) and Milner Bay (Groote Eylandt) operates from Brisbane to the Gulf of Carpentaria ports. Bulk carriers load ore and other mining products for delivery to ports in Australia and overseas.

Two Darwin-based companies operate landing craft to Aboriginal communities and ports along the coast. The vessel, Frances Bay, is involved in overseas trade from Darwin to Singapore and other South East Asian ports.

Air services

At 1 September 1983 there were 87 licensed aerodromes plus 4 Commonwealth controlled airports in the Territory. Qantas operates a weekly international service from Darwin to Singapore whilst Garuda Indonesian Airways provides a twice weekly service to Den Pasar (Bali). Regular services to Darwin with intermediate stops at some Territory centres are operated by Trans Australian Airlines and Ansett Airlines of Australia from mainland capital cities and by Airlines of Western Australia from Western Australia. Airlines of Northern Australia commenced operations in 1981 and provide a network to all major Territory centres. The Northern Territory Aerial Medical Service has aircraft based at Darwin and Gove while the Royal Flying Doctor Service operates from Alice Springs. Regular commuter services operate from Darwin, Katherine and Alice Springs to outlying centres. Charter services are available at Darwin, Alice Springs, Gove, Groote Eylandt, Katherine, Tennant Creek, Ayers Rock and Jabiru. Responsibility for the economic licensing of domestic operations passed from the Commonwealth to the Northern Territory Government on 1 June 1980. The Commonwealth Government retains responsibility for safety and operational aspects and works closely with Territory authorities in the licensing of commercial operations within the Territory.

Several organisations provide helicopter services particularly for cattle mustering and aerial survey. In 1981 heavy helicopter activity from Darwin increased in support of offshore drilling rigs involved in oil and gas exploration.

Civil aircraft under contracts to the Department of Transport, Australia, operate on extensive coastal surveillance operation from Darwin.

Post, telegraph, telephone, radio and television

Postal communication is maintained by daily air transport between major Northern Territory centres and the capital cities of Australia. Large centres receive surface mails by two major road mail services operating from Queensland and South Australia. More remote centres are served by aerial services. Direct mail despatches are exchanged between Darwin and several overseas countries.

Trunk telephone links to Darwin extend from Townsville via a broadband microwave radio relay system, and from Adelaide via systems operated over leased circuits on the NAR Tarcoola-Alice Springs microwave link. These systems also carry telegraph and data traffic and serve towns along the routes. Subscriber trunk dialling facilities were introduced to Darwin, Nhulunbuy (Gove Peninsula) in 1974 and to Katherine in 1975. ISD (International Subscriber Dialling) was introduced to telephone exchanges in the Darwin area and to Katherine and Nhulunbuy in December 1976. Tennant Creek and Elliott telephone services were connected to automatic with subscriber trunk dialling facilities during 1979.

Completion of Australia's first solar-powered broadband microwave relay system between Tennant Creek and Alice Springs in October 1979 brought subscriber trunk dialling and ISD facilities to Alice Springs. It also provides live television programs to the National Television Service transmitter at Alice Springs.

The automatic conversion program in the Northern Territory is now complete and all services are provided with direct dialling facilities and access to STD. High frequency radio telephone exchanges at Katherine and Alice Springs provide connections to the telephone network for some of the remote properties in the Northern Territory. The majority of homesteads on pastoral leases are equipped with radio transceivers operating through the Royal Flying Doctor base at Alice Springs or the Telecom Australia Outpost Radio base in Darwin which provide a message passing and emergency communications service. A number of homesteads and settlements adjacent to the Darwin-Isa and Tennant Creek-Alice Springs microwave corridors are provided with VHF radio telephone giving 24 hour service with STD facilities.

Telecom's major thrust in the Northern Territory is an extension of the network to outback areas, scheduled for completion by 1990. Utilisation of new technology such as the Australian-developed Digital Radio concentrator system and the domestic satellite will bring world standard telephone service to all customers, however isolated.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek, Katherine and Gove and there are commercial broadcasting stations located at Darwin and Alice Springs. Two television stations, ABD Channel 6 of the national broadcasting system and NTD Channel 8, a commercial station, operate in Darwin. The Darwin ABD 6 national program is also broadcast in Katherine (ABKN 7) and Tennant Creek (ABTD 9) with a translator (ABTD 9 – 10) to give coverage of the mining residential area at Warrego. A national television station, ABAD Channel 7, operates in Alice Springs. Remote area television provided, via satellite to earth, stations at Elcho Island, Nhulunbuy, Groote Eylandt, Jabiru, Daly River and Boroloola in early 1983.

Education

See also Chapter 12, Education.

Responsibility for education in the Northern Territory was transferred from the Commonwealth Department of Education to the Northern Territory Government on 1 July 1979.

Since that date education services have been provided by the Northern Territory Department of Education.

Details of the responsibilities are outlined in the *Northern Territory of Australia Education Act* 1979. Under the Act, the Minister for Education is responsible for the general administration and control of education services. The Act states that the Minister may take all measures which, in his opinion, are necessary or desirable to assist parents of children in the Territory in fulfilling the responsibility to educate their children according to the individual needs and abilities of those children; to make education services, provided by him, available to all people in the Territory; and to assist all people of the Territory with their own education. The Act also provides for the establishment of Advisory Councils.

Schools in the Northern Territory

At 31 July 1983 there were 150 schools in the Northern Territory with a total school population of 32,257. Of that number 3,704 attended 11 private schools and 1,188 attended mission schools. Approximately 9,936 students were of Aboriginal descent. In addition to primary and pre-schools, there are 10 government high schools, one secondary correspondence school and three private high schools. There are three area schools offering secondary courses and two residential colleges for Aboriginal students. There are also 22 government schools in Aboriginal communities that offer post-primary courses and six mission schools with post-primary programs.

Teaching staff are provided by the Northern Territory Teaching Service and qualified applicants are recruited from all parts of Australia.

With the exception of Year 12 level, where most students are assessed by the Senior Secondary Assessment Board of South Australia, all aspects of curriculum, course accreditation and student assessment are the responsibility of the Northern Territory Board of Studies, with subject area committees in Language, Mathematics, Science, Computer Education, Social and Cultural Education, The Arts, Health and Physical Education and Life/Work Skills. Apart from Life/Work Skills, which is concerned with secondary education only, all committees span primary and secondary education from Transition to Year 12.

Subject area committees define the core of essential skills and understandings in which all students should gain competence and the educational experiences which they should have during their primary and junior secondary schooling. They also identify or develop the recommended curricula, which consists of those courses and materials which are regarded as the best available to schools to assist in achieving the objectives specified in the core, as well as skills, understandings, content and experiences considered appropriate for extension beyond the core.

In addition to curriculum development, subject area committees provide for teachers guidelines on the assessment of student performance, examples of assessment instruments and, in some subjects, moderation of student assessment. The Junior and Senior Secondary Studies Certificates are issued by the Northern Territory Board of Studies at Year 10 and Senior levels respectively.

The work of subject area committees is co-ordinated and supplemented by curriculum officers at central and regional levels and by a range of educational services.

The two Schools of the Air in the Northern Territory, one at Katherine and one at Alice Springs, have developed individual programs and provide correspondence and radio lessons for students in the years One to Seven. One correspondence school caters for isolated secondary students. Aerial and road patrols are carried out regularly to provide teacher/student and parent contact.

Special schools are located in Alice Springs and Darwin for handicapped children. However, where appropriate, students with special needs are integrated into primary and secondary schools. Guidance and Special Education Advisory services operate from the two Regional Offices in Alice Springs and Darwin.

A program of exchange between Indonesia and the Northern Territory is continuing in which up to two teachers from each country are exchanged for a school year, and four senior students spend up to six months in each country. The Northern Territory have also sponsored a group of junior high school students and teachers from Bali on a two-week educational visit to the Territory each year.

Aboriginal education

Most Northern Territory Aboriginals live away from town centres and their education is provided in various settings including mission schools, government schools on or near Settlements or Aboriginal townships, on pastoral properties and outstations or homeland centres.

There has been an increasing number of requests from outstations for the Department of Education to provide assistance. A small group of teachers is currently working in this field and developing special methods and modified courses to help overcome the difficulties faced by isolated outstation groups in their quest for education.

Government schools for Aboriginal children in out-of-town centres provide tuition at pre-school and primary school level with a number of them providing post primary (secondary age) classes as well.

For Aboriginal children who wish to proceed to secondary schools there are now two residential colleges: Yirara and Kormilda. These colleges are regionally based but situated near urban centres, Yirara at Alice Springs and Kormilda in Darwin. They provide secondary age students from outlying centres with the opportunity to undertake a range of courses internally or to attend an urban high school.

Bilingual education programs in Northern Territory schools in Aboriginal communities have attracted wide interest from within Australia and overseas. There are 16 schools offering bilingual programs to 3,500 students. Six further programs are under consideration. Many other schools include Aboriginal language and culture in the curriculum. Twelve languages are now being used in the program and 6 further languages are under consideration. Many school children are acquiring initial literacy skills in their own language. Although a large proportion of the curriculum is devoted to instruction in an Aboriginal language, a structured English course forms an integral part of the bilingual program. Other aspects of Aboriginal education are covered in the TAFE section.

Darwin Community College

The College was opened in 1974 and is an autonomous, multi-purpose institution. It has Schools of Business and Administration, General Studies, Creative and Applied Art, Technology and Science, Trades, and Australian Linguistics. As well as courses at Advanced Education and TAFE levels leading to awards, the College provides a wide range of non-award recreational classes. It provides examination facilities and some tutorial assistance to external students in the N.T. studying at other Australian institutions, through the N.T. External Studies Centre at the Casuarina Campus. The College is currently divided into four campuses: the main one at Casuarina; the School of General Studies at Winnellie (temporary campus); the School of Australian Linguistics at Batchelor, and an annexe of the Division of Extension Services at Nhulunbuy. Annual enrolment is 7,500.

Vocational Training

The N.T. Industries Training Commission after amendment to legislation in December 1982 is now known as the N.T. Vocational Training Commission. The amendment also transferred the formulation of policy and planning for technical and further education from the Department of Education to the Commission.

The Commission has a tripartite membership of employer, employee and Government representation. Functions include manpower planning, labour market research, supervision of apprentice training, co-ordination of and policy and planning for technical and further education, accreditation of technical and further education courses, policy and planning for Aboriginal employment and training, industry liaison and promotion of industry training.

Technical and Further Education

Aboriginal Adult Education. Most large Aboriginal communities have an Adult Educator who relates to adults in the community and arranges non-formal programs which he or local part-time instructors and visiting lecturers teach.

Communities are developing more confidence in the management of their own affairs. There is thus a growing demand for Adult Education requiring a co-ordinated effort on the part of all agencies offering Adult Education services.

Community College of Central Australia. Prior to 1 July 1979, this college was a campus of Darwin Community College. It offers electrical and aircraft engineering licences, apprenticeship, business, secretarial, tourism, hospitality, Aboriginal development, technology, art, matriculation and preparatory studies, non-credit refresher, recreational and general education courses and a tutorial program for degrees, diplomas and certificates from Warrnambool Institute of Advanced Education, Darwin Community College and the South Australian Department of Technical and Further Education.

Katherine Rural College began teaching in 1979 and is residential. It offers a one year and a two year full-time Certificate course in Rural Studies and short courses such as power saw maintenance, water conservation and use, helicopter mustering and horse shoeing.

Batchelor College is a residential institution providing programs for Aboriginal people leading to teacher education qualifications at advanced education and TAFE levels.

Adult Migrant Education Centre supersedes Adult Migrant Education Service courses and provides courses for on-arrival migrants and adult migrants preparing to enter the work force.

Finance

The following table gives details of government receipts and outlays that have been identified as relating specifically to the performance of local or State-type functions in the Northern Territory for 1979–80, 1980–81 and 1981–82. Receipts collected in the Northern Territory from Australia-wide sources (e.g. income taxes, customs duties, etc.) and outlays in the Northern Territory on items of a national character (e.g. defence, civil aviation and cash benefits paid to Northern Territory residents as part of national programs) are *not* included.

In addition to transactions relating to the Northern Territory in the Consolidated Revenue Fund and certain trust funds the transactions of the following public corporations are included: Northern Territory Port Authority, Northern Territory Housing Commission, Northern Territory Electricity Commission, Jabiru Town Development Authority, Corporation of the City of Darwin, Corporation of the Municipality of Alice Springs, Corporation of the Municipality of Katherine and Corporation of the Municipality of Tennant Creek.

NORTHERN TERRITORY: OUTLAY AND RECEIPTS
($'000)

	1979–80	*1980–81*	*1981–82*
OUTLAY			
Final consumption expenditure—			
Law, order and public safety	34,128	40,232	47,458
Education	71,285	85,935	100,611
Health	59,146	72,144	76,229
Social security and welfare	12,749	26,040	28,138
Other	106,500	137,715	178,612
Gross fixed capital expenditure on new assets and stocks—			
Education	13,377	11,478	17,815
Roads	50,178	54,236	55,120
Housing and regional development	22,467	33,838	45,484
Health	9,892	3,145	2,917
Social security and welfare	195	532	126
Electricity, gas and water	47,624	19,545	25,383
Other	40,550	49,702	37,410
Net purchase of existing assets	−10,115	16,806	10,070
Interest paid	13,521	24,997	34,945
Cash benefits	451	629	801
Subsidies	55	366	1,965
Net advances to the private sector—			
Housing and community amenities	26,144	48,518	50,869
Other	−1,069	−589	−809
Grants for private capital purposes	696	570	640
Advances to public financial enterprises	—	—	—
Total outlay	**497,774**	**625,839**	**713,784**
RECEIPTS			
Taxation—			
Payroll tax	15,209	17,169	18,307
Rates on land	5,622	6,353	7,891
Stamp duties	3,064	4,304	6,232
Motor registration	3,098	3,057	3,798
Other taxes, fees, fines, etc.	4,799	7,041	9,649
Interest, rent, etc.	15,132	25,412	28,037
Income from public enterprises	−23,076	−41,645	−44,864
Net sale of local authority and public corporation securities	32,212	34,245	35,172
Other receipts	−3,473	12,788	20,999
Commonwealth Government grants and advances	445,190	557,115	628,563
Total receipts	**497,777**	**625,839**	**713,784**

THE AUSTRALIAN CAPITAL TERRITORY

General description

The Constitution provides that the Seat of Government of the Commonwealth of Australia shall be in the State of New South Wales but distant not less than 160 kilometres from Sydney. After a number of alternative sites were considered, an area of 2,359 square kilometres lying approximately 320 kilometres south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 73 square kilometres at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of Territories and Local Government, whose functions include housing, public transport, forestry and municipal services. Education, public health and justice are the responsibilities of the Department of Education, the Capital Territory Health Commission and the Attorney-General's Department respectively. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

In 1974, the A.C.T. Advisory Council, which had been in existence since 1930, was replaced by the A.C.T. Legislative Assembly. The first Assembly was elected on 28 September 1974 and held its first meeting on 28 October 1974.

During 1979, the name of the A.C.T. Legislative Assembly was changed to the A.C.T. House of Assembly. The first election for the House of Assembly was held on 2 June 1979 and first meeting of the House of Assembly was held on 29 June. The Assembly is established by the *House of Assembly Ordinance* 1936 which defines its role as follows:

'The Assembly may advise the Minister (for Territories and Local Government) in relation to any matter affecting the Territory including the making of new Ordinances or the repeal or amendment of existing Ordinances.'

The Assembly consists of 18 Members (9 from each of the electoral divisions of Canberra and Fraser) and its procedure is modelled on that of the House of Representatives. Its Members serve on a part-time basis.

The Assembly normally considers (and sometimes introduces) Ordinances which are proposed for the Territory. It also passes resolutions on matters affecting the Territory. It is represented on a number of boards, authorities and committees such as the Canberra Commercial Development Authority, the A.C.T. Electricity Authority, the A.C.T. Schools Authority, the Gaming and Liquor Authority, the Consumer Affairs Council and the Australian Constitutional Convention.

At 30 June 1983, the population of the Australian Capital Territory was 234,900. *See also* Chapter 6, Demography.

National Capital Development Commission

The *National Capital Development Commission Act* 1957 provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1982–83 was the twenty-sixth year of the Commission's operations. Construction work was carried out by means of agency operations with the Department of Housing and Construction and by private consultants. Expenditure in recent years is as follows: 1979–80, $136.2 million; 1980–81, $112.4 million; 1981–82, $81.2 million. Total expenditure in 1982–83 was $97.8 million comprising: land development and services $5.4 million; water, sewerage and stormwater services and headworks $0.6 million; housing, flats and other accommodation $11.6 million; educational facilities $8.9 million; roads, public transport and traffic control $10.1 million; city works and associated facilities $8.9 million; Commonwealth Government offices $19.3 million; national works $14.6 million; health and welfare facilities $2.8 million; others $15.6 million.

Works and services

Housing

Until the period following the 1939–45 War, most houses and flats in the Australian Capital Territory were built and rented by the then Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise and, as a result, the proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of Territories and Local Government (formerly the Department of the Capital Territory) has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961, 38.8 per cent in 1966, 28.1 per cent in 1971, 13.3 per cent in 1981 and 10 per cent in 1983. Although the bulk of rented accommodation is provided by public authorities (and this situation will continue in the foreseeable future), there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961, 45.6 per cent in 1966, 51.8 per cent in 1971, 67.2 per cent in 1981. Home building activity in Woden Valley, Weston Creek, Tuggeranong and Belconnen has continued to expand. At June 1983 there were 19,419 occupied dwellings in the Woden Valley and Weston Creek area, 22,803 occupied dwellings in the Belconnen area and 10,905 occupied dwellings in the Tuggeranong area. *See also* Chapter 19, Housing and Construction.

Municipal services

Since its establishment, Canberra has been developed as a garden city. City Parks Administration of the Department of Territories and Local Government manages urban parklands, gardens and sportsgrounds; rural picnic areas, and the national Botanic Gardens. The total area managed increased by approximately 310 hectares (ha) to 8,100 ha in 1982–83.

The Yarralumla Nursery, established in 1913, propagates trees and shrubs for use in development projects and as replacements in landscape maintenance. Plant production during 1982-83 decreased because of the drought by 10,000 plants to 250,000.

The Horticultural Services Unit provides horticultural advice and trials turf grasses, trees, shrubs and new products and techniques for application in the Canberra environment.

Production

See also the chapter dealing with particular subjects.

Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land. The Agricultural Industry chapter in this Year Book contains statistical information on these subjects.

With minor exceptions the freehold estate of land in the Australian Capital Territory has been acquired by, and is vested in the Crown. The *Seat of Government* (*Administration*) *Act* 1910 prevents the sale or disposal of such Crown land for any estate in freehold except in the case of a contract that preceded the Act. Progressively the remaining areas of freehold land are being acquired.

Leases of land for residential, commercial and other purposes in the city area are usually granted under the *City Area Leases Ordinance* 1936. Some special leases for other purposes (such as diplomatic sites or churches) are granted under the *Leases* (*Special Purposes*) *Ordinance* 1925 or the *Church Lands Leases Ordinance* 1924 or the *Leases Ordinance* 1918 if for a short term or experimental land use. Some areas outside the city area not immediately required for the development of the City or for other public purposes or where there is no intention of development are leased for agriculture or grazing under the *Leases·Ordinance* 1918. Approximately 57,000 ha are included in Nature Reserves declared under the *Public Parks Ordinance* 1928.

The Commonwealth Territory at Jervis Bay, comprising about 7,360 ha, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (*H.M.A.S. Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet plus an area on Bowen Island have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. An Aboriginal community is located at Wreck Bay. Approximately two thirds of the Territory is declared a Nature Reserve under the *Public Parks Ordinance* 1928. The reserved area and adjacent land managed in sympathy with the Reserve includes picnic and camping areas, afforestation and soil conservation activities and an annex to the National Botanic Gardens.

Forestry

Forestry field operations in the Australian Capital Territory began in 1915 with the planting of pines on the denuded slopes of Mount Stromlo to arrest soil erosion and improve visual quality of the landscape. In 1926, a program for development of commercial forests was approved following a comprehensive review of the Territory's potential for forest development. Major reviews of this program were made in 1932, 1954, 1967 and 1983, always, however, retaining the basic policy of systematic conservation and development. All of the better native forest has been placed under management. Forestry operations including fire protection treatment have been extended to some 44,500 ha of natural forest in the Cotter catchment and adjacent areas. The more productive stands in these areas were harvested extensively to provide timber for Canberra's post-war expansion and were subsequently treated to promote regeneration and protect the quality of water harvested.

The policy of forest management in the Australian Capital Territory has been formulated to cater not only for commercial timber production but also to provide recreation facilities and an attractive visual environment for the national capital and to protect the water supply.

The forest authority is charged with the management of some 76,000 ha of land in the Australian Capital Territory. Of this, some 48,000 ha carry native forest or woodland. As at 30 June 1983, the total area of coniferous plantations in the Australian Capital Territory and Jervis Bay was 17,608 ha nett. Of 220 ha at Jervis Bay, the majority consisted of *Pinus radiata* (Monterey Pine) and *Pinus elliottii* (Slash Pine). The plantations in the Australian Capital Territory consisted mainly of *Pinus radiata* and *Pinus ponderosa* (Yellow Pine). Total area of *Pinus radiata* was 15,600 ha.

In 1982-83 there was no commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. The volume of softwood cut was 161,000 cubic metres. The total value of this unprocessed timber unloaded at the mill (milldoor value) was $5.2 million.

Agricultural and secondary industries

Since 1974–75 the number of agricultural establishments in the Australian Capital Territory has fallen from 142 to 95. In 1982–83 small amounts of wheat and oats for grain were grown and over 6,000 tonnes of meat (carcass weight) produced. Livestock numbers at 31 March 1983 included 10,168 cattle and 104,167 sheep.

Secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

AUSTRALIAN CAPITAL TERRITORY: MANUFACTURING ESTABLISHMENTS—1979–80 to 1981–82

	Unit	*1979–80*	*1980–81*	1981–82
Establishments operating during year	No.	112	117	126
Persons employed (*a*)	No.	3,132	3,316	3,451
Wages and salaries	$m	37.2	44.9	49.4
Turnover	$m	127.2	162.9	187.7
Opening stocks at 30 June	$m	11.4	13.5	14.4
Closing stocks at 30 June	$m	12.6	16.7	16.8
Purchases, transfers in and selected expenses	$m	64.0	89.3	111.7
Value added	$m	64.4	76.8	78.4

(*a*) Average over whole year. Includes working proprietors.

Commercial practices

There is growing awareness of consumer rights as evidenced by the increasing number of enquiries received by the A.C.T. Consumer Affairs Bureau and the wide range of consumer oriented legislation.

The Bureau receives and investigates complaints from consumers, conducts research into matters affecting consumer interests and provides information of benefit to consumers.

Control over weights and measures standards traditionally has been, and remains, a prerequisite for fair commercial transactions. The Weights and Measures Office periodically examines the scales and measures used for trade. The office monitors the weight or measure of all packaged goods sold in retail premises.

In the A.C.T., licensing is used as a means of regulating some commercial practices by establishing minimum standards of qualifications and/or experience for entry into certain occupations. These include motor vehicle dealers, stock and station and real estate agents, and pawnbrokers and secondhand dealers.

The *Co-operative Societies Ordinance* 1939 provides for the incorporation of building societies, housing and service societies and credit unions. The Registrar is responsible for the incorporation of new societies, the registration of documents, inspections and inquiries into the working and financial situation of societies and the hearing and determination of certain disputes between a society and a member.

In Canberra there are two retail fruit and vegetable markets. These have been established, operated and controlled by the Canberra Retail Markets Trust. The establishment of a third market in the Tuggeranong Valley is being considered.

Transport and communication

The Department of Territories and Local Government is responsible for the regulation of transport and traffic under an A.C.T. Ordinance. ACTION, the Australian Capital Territory Internal Omnibus Network, is also operated by the Department of Territories and Local Government. It operated 362 buses in 1982–83 over 109 routes covering 1,351 kilometres. A total of 14,529,043 kilometres was travelled and 20,534,900 passenger journeys made.

There are six radio broadcasting stations currently in the Territory with the possibility of one new commercial licence and one community licence being granted in 1984: 2CY, 2CN and ABC-FM of the national broadcasting system; two commercial stations, 2CA and 2CC; and one community station, 2XX. There are three television stations, ABC Channel 3 of the national broadcasting system; Channel 0-28 of the Special Broadcasting Service and Australian Capital Television Pty Ltd (Capital 7), a Canberra based commercial station.

Social

See also Chapter 12, Education; Chapter 10, Health; and Chapter 11, Law and Order.

Schools

The *Education Ordinance* 1937 provides for the compulsory attendance at school of children between the ages of six and fifteen years. Government schools are administered by the A.C.T. Schools Authority, which became a Statutory body in January 1977. The Authority is representative of teachers, parents and the community. The A.C.T. Schools Accrediting Agency within the Authority system accredits courses and administers student assessment procedures for Years 11 and 12. These procedures replaced the New South Wales Higher School Certificate examination at the end of 1976.

In July 1983 there were seventeen government high schools in the Australian Capital Territory, and eight secondary colleges. High schools cater for Years 7 to 10 and secondary colleges for Years 11 and 12. Secondary students enrolled numbered 16,334.

Sixty-three schools provide courses at primary levels, three of these being in rural districts and one in the Jervis Bay area. The number of pupils enrolled in government primary schools at July 1983 was 23,331.

There are four government special schools in the A.C.T. with a total enrolment of 308 students. These schools cater for pre-school, primary and secondary school aged students who are physically or intellectually handicapped. There are four other Special Facility Establishments in the A.C.T., two providing schooling for hospitalised students, two catering for severely or profoundly intellectually handicapped students. The total enrolment at these facilities was 37 at July 1983. Mildly intellectually handicapped children are served by learning centres attached to nine primary schools and three high schools.

Special units for deaf children are available to three schools, while blind children receive specialised support. Children below school age with learning, sight or hearing problems receive assistance from specially-trained staff at pre-schools and in their homes.

Ten primary schools cater for children of junior primary age who are unable to adjust to a normal class situation. One school caters for children with language and communication disorders. Educational guidance services are provided by two Education Clinics and through counselling staff attached to schools.

Special English classes for migrant children are available at forty-five primary schools, nine high schools and six secondary colleges. Two Introductory English Centres (one for primary, one for secondary aged pupils) cater for migrant children with little or no English. They attend for up to six months and then return to their neighbourhood school or college.

The seventy-three pre-schools provide facilities for 4,737 children between the ages of three and five years. Provision is made at all pre-schools for the additional enrolment of children who have minimal problems such as speech, behavioural and family problems.

In July 1983 there were twenty-three non-government primary schools in Canberra, seven schools offering both primary and secondary schooling and four schools with secondary grades only. There were 10,233 pupils enrolled in primary grades at non-government schools and 8,104 in the secondary grades at these schools.

A.C.T. Further Education

The Office of A.C.T. Further Education which operates within the structure of the Department of Education is responsible for the Technical and Further Education Colleges, the Canberra School of Art and the Canberra School of Music. The Office is also responsible for the A.C.T. Apprenticeship Board and Adult Migrant Education.

There are presently three TAFE Colleges in the A.C.T.; Canberra, Bruce and Woden. These Colleges provide trade, post trade, certificate, associate diploma, craft and leisure type courses at their main campuses and at several annexes. In the year ended 31 December 1981 there were 19,078 enrolments in A.C.T. TAFE Colleges.

The Canberra School of Art offers a Diploma of Arts (Visual), three years full-time study (or part-time equivalent), an Associate Diploma of Arts (Visual), two years full-time study (or part-time equivalent) and a Post-graduate Diploma, one year full-time study. It also provides art courses for students from the Canberra College of Advanced Education as well as non-vocational classes for the community in general. In the year ended 31 December 1981 there were 969 enrolments.

The Canberra School of Music offers a Bachelor of Music, four years full-time study and a Diploma of Music, three years full-time study. Courses for Canberra College of Advanced Education students and single study classes for part-time students are also offered. In the year ended 31 December 1981 there were 609 enrolments.

It should be noted that enrolment figures shown here are course enrolments and are not adjusted for those students enrolled in more than one course at any time.

Other Tertiary Educational Institutions

The Canberra College of Advanced Education is administered by a Governing Council constituted under an Act of Parliament and offers courses in six schools—Administrative Studies, Applied Science, Liberal Studies, Education, Information Sciences and Environmental Design. Courses have a professional or vocational orientation and lead to master and bachelor degrees, and associate and graduate diplomas. There were 5,232 students enrolled as at April 1982.

The Australian National University was established by an Act of Parliament and is administered by its governing Council. The Institute of Advanced Studies within the University is a centre for research and training in research. It includes the John Curtin School of Medical Research and Research Schools of Physical Sciences, Social Sciences, Pacific Studies, Chemistry, Biological Sciences and Earth Sciences. The faculties carry out both undergraduate and post-graduate training and research and are composed of the faculties of Arts, Asian Studies, Economics, Law and Science. The total student enrolment as at April 1982 was 5,851.

The University has established the following centres: Centre for Resource and Environmental Studies; Humanities Research Centre; North Australia Research Unit (based in Darwin); Centre for Continuing Education; Computer Services Centre; Office for Research in Academic Methods; and the National Health and Medical Research Council Social Psychiatry Research Unit.

Continuing education

The Centre for Continuing Education, which is run by the Australian National University, is intended to foster 'the learning society' by enriching the contacts between the university and the community to their mutual advantage. The Centre offers a wide range of courses in the natural and social sciences and the humanities.

Evening classes in the A.C.T. are provided at two high schools and four secondary colleges as a continuing education service of the A.C.T. Schools Authority. Enrolments in evening classes in July 1983 numbered 3,146, of which 1,936 were enrolled in recreational classes. Evening classes offer courses leading to the award of a certificate of entry to post-secondary and tertiary institutions as well as a variety of craft and cultural courses.

Apprenticeship training

At 30 June 1982, 1,391 indentured apprentices were in training in the 53 declared apprenticeship trades in the Australian Capital Territory. Apprentices were employed by about 800 approved employers. During 1981–82 there were 1,201 applications for apprenticeships. New indentures totalling 531 were registered, representing an increase of 4.5 per cent in new indentures on 1980–81 totals. In this period 342 apprenticeships were completed and 165 cancelled. Trade courses at the TAFE colleges are supplemented, where required, by remedial classes in Mathematics and English.

Adult migrant education

The Office of A.C.T. Further Education, on behalf of the Department of Immigration and Ethnic Affairs, is responsible for the Adult Migrant Education Program in the A.C.T. All classes are free and they are open to migrants who are permanent residents of Australia.

The language program is organised in two strands, an on-going strand for migrants who have been in Australia for some time and an on-arrival strand for newly arrived migrants. As part of the on-going program part-time classes are offered at different levels and at various times in the day and evening. A more intensive part-time course, aimed primarily at unemployed migrants whose lack of proficiency in the English language is prejudicing their employment prospects, is available as is a full-time accelerated English course lasting ten weeks.

As well, English classes are provided in the work place either partly or wholly within working hours. Migrants who are unable to attend classes may undertake a correspondence course, or have a tutor visit them in their own homes.

The on-arrival strand of the program caters for migrants who have arrived in Australia within the previous six months. The full-time courses offered provide an introduction to Australian society and way of life as well as a basic English language instruction. On completion, students are encouraged to enrol in part-time classes.

All migrants attending full-time courses are eligible to receive a living allowance.

Tourism

Tourism is important to the A.C.T. economy and in the planning and development of the Capital. The number of visitors per annum now approximates 3 million and their expenditure in the Territory and Queanbeyan $180 million. It is estimated tourism sustains employment for 7,000 people in the district.

The official tourist servicing and promotional operation in the A.C.T. is provided by the Department of Territories and Local Government through the Canberra Tourist Bureau. Planning and development of physical facilities remain the responsibility of the National Capital Development Commission.

The Bureau operates a highway reception and information centre on the northern (main) gateway to the city, and branch offices in Sydney and Melbourne. Total operational costs, including salaries and overtime, will approximate $1,720,000 in 1983–84.

Most patronised tourist features in the A.C.T. are the Australian War Memorial, the Black Mountain Telecommunication Tower, the High Court of Australia, Parliament House, the National Library, the Australian National Gallery, the Royal Australian Mint, and the mountain lookouts and reserves. The most important new attraction under construction is the new and permanent Parliament House. This yearbook features a special article on the new Parliament House.

Finance

In the following table, identifiable receipts and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Commonwealth Government in respect of the Australian Capital Territory in the Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following public corporations are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks (to September 1979), Canberra Retail Market Trust, National Capital Development Commission, the Canberra Theatre Trust, the Canberra College of Advanced Education, A.C.T. Gaming and Liquor Authority, Canberra Commercial Development Authority and the Capital Territory Health Commission including the Canberra and Woden Valley Hospitals. Not included are revenue derived by the Commonwealth Government from income taxes, sales tax, etc., levied in the Australian Capital Territory; outlay on items of a national character such as defence, civil aviation, railways, etc.; and payments to residents from the National Welfare Fund.

AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY

($'000)

	1976–77	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
RECEIPTS						
Taxation—						
Rates on land	12,098	13,634	15,011	16,540	19,249	20,910
Liquor	1,260	1,325	2,395	2,136	2,968	3,455
Motor registration and licences	4,954	7,127	7,859	7,793	7,789	10,621
Payroll tax	11,296	11,945	13,142	12,373	13,184	15,275
Stamp duties	4,455	5,003	5,573	6,904	8,382	10,792
Other taxes, fees, fines, etc.	1,635	2,839	4,223	5,135	6,161	5,713
Interest, rent, etc.	21,899	26,214	25,993	25,986	31,650	29,227
Income from public enterprises	4,566	4,301	4,762	6,131	6,454	11,482
Net sale of public corporation securities	(*a*) 27,903	(*a*) 15,492	6,798	7,031	−728	3,291
Other receipts	(*a*) −9,778	18,649	12,960	12,269	2,686	3,756
Net charge to Commonwealth Government budget	316,292	329,207	294,665	297,898	278,312	293,311
Total receipts	**396,580**	**435,736**	**393,381**	**400,195**	**376,107**	**407,833**
OUTLAY						
Final consumption expenditure—						
Law, order and public safety	13,808	16,109	19,215	21,099	22,473	32,079
Education	79,089	91,140	100,552	112,048	129,789	151,102
Health, social security and welfare	42,808	49,993	54,859	64,395	74,476	84,192
Other	49,949	47,400	43,452	50,756	57,484	59,041
Expenditure on new fixed assets and stocks—						
Education	31,186	26,367	20,676	20,728	16,653	7,854
Health, social security and welfare	7,406	8,493	8,941	5,775	5,505	4,077
Housing	−1,777	−5,263	−4,751	−7,016	−9,734	−8,265
Community and regional development	35,235	32,984	16,000	10,211	12,567	10,298
Protection of the environment	24,277	13,212	8,366	5,024	1,660	1,516
Recreation and related cultural services	10,371	11,751	13,999	17,356	26,470	20,355
Electricity, gas and water	28,817	25,495	16,465	6,935	10,783	8,580
Roads	11,937	30,819	31,882	25,763	15,667	13,689
Other	49,535	63,828	57,051	64,358	36,694	25,226
Net purchase of existing assets	−19,426	−13,604	−17,423	−15,687	−37,858	−25,161
Interest paid	853	3,213	4,692	6,888	6,416	6,480
Cash benefits	1,911	2,862	4,060	4,686	6,117	7,226
Subsidies	167	207	191	376	451	224
Net advances for housing	19,480	21,490	7,566	1,502	−3,401	6,491
Grants for private capital purposes	10,954	9,240	7,588	4,998	3,895	2,829
Total outlay	**396,580**	**435,736**	**393,381**	**400,195**	**376,107**	**407,833**

(*a*) Includes financing transactions of the Canberra Commercial Development Authority.

NORFOLK ISLAND

General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°02′S, longitude 167°57′E approximately. Its total area is approximately 3,455 hectares, the island being about 8 kilometres long and 5 kilometres wide. It is 1,676 kilometres from Sydney and 1,063 kilometres from Auckland. The coastline, which is 32 kilometres long, consists of almost inaccessible cliffs rising from the waters edge, except at Kingston in the south and the landing place at Cascade on the northern side. The climate is equable, the average daily maximum temperature varying between 16°C and 28°C, and the average annual rainfall is 1,350 millimetres. The resident population is about 1,800.

The island served as a penal station from 1788 to 1813 and from 1825 to 1855. In 1856, 194 descendants of the *Bounty* mutineers were transferred there from Pitcairn Island.

Administration

In 1856, the Island was created a distinct and separate settlement under the jurisdiction of the Governor of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, became a Territory of Australia.

In May 1978 the Government announced that it should try to develop for Norfolk Island a form of Government involving the Island's own elected representatives under which the necessary revenue could be raised by its own system of law. The *Norfolk Island Act* 1979, which was assented to on 30 May, established the framework for this objective. In broad terms, the Act equips Norfolk Island with responsible legislative and executive government to enable it to run its own affairs to the greatest practicable extent. Wide powers are exercised by the Norfolk Island Legislative Assembly and by an Executive Council, comprising the executive members of the Legislative Assembly who have ministerial-type responsibilities. The Act preserves the Commonwealth's responsibility for Norfolk Island as a Territory under its authority, with the Minister for Territories and Local Government as the responsible Minister; and indicates the Parliament's intention that consideration will be given to an extension of the powers of the Legislative Assembly and the political and administrative institutions of Norfolk Island within five years.

The Office of the Administrator is financed from Commonwealth expenditure which amounted to $227,000 in 1982–83. A further $286,000 was provided by the Commonwealth during the year for the restoration and maintenance of historic structures.

Economic activity

The major economic activity of the island is tourism. Primary production is not fully adequate for local needs and foodstuffs are imported from New Zealand and Australia, mainly for the tourist trade.

Primary industries. The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and there is only very limited production of export crops.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry program is being carried out to increase the resources of Norfolk Island Pine and to introduce suitable types of eucalypts.

Tourists. Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. At present, accommodation consists of flats and hotels as well as licensed and unlicensed guest houses.

Employment. A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Commonwealth Government provides service through staff from the Departments of Transport and Science and Technology (Bureau of Meteorology) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

Trade, transport and communication

Imports to Norfolk Island since the 1939–45 War have risen from $65,000 in 1945–46 to over $15 million in 1982–83. The major proportion came from Australia and New Zealand. Exports in 1982–83 amounted to $2.9 million to Australia and New Zealand, the principal markets. No duties are chargeable on goods imported into Australia from Norfolk Island if (i) the goods are produced or manufactured in Norfolk Island and shipped direct to Australia, and (ii) not goods which, if manufactured or produced in Australia, would be subject to excise duty.

One shipping company operates a service to Norfolk Island at approximately monthly intervals, linking the Island with Australia, New Zealand and other islands in the South Pacific area.

A passenger and air freight service between Sydney and Norfolk Island is operated by East-West Airlines Ltd. 4-6 times a week, and more frequently in peak periods. Air New Zealand Limited provides a service 3-4 times a week to the Island from Auckland. A light aircraft charter service operates daily between the island and Brisbane.

There are approximately 80 kilometres of motor roads on the island. A substantial section of the population possesses private motor cars. Hire cars, taxis and scooters are available.

The island has an automatic telephone service and radio telephone link with Sydney. A local broadcasting service is operated by the Administration.

Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted for the Administration by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from Kindergarten to the School Certificate (Year 10) level. The number of students enrolled at 30 June 1983 was 291.

Some bursaries, subject to a means test, are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or to undertake high school courses not available on the Island. A limited number of trainee scholarships are available for pupils who have left school and wish to undertake apprenticeships or similar training away from the Island.

Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of the court is exercised by one judge sitting in court or, to the extent that in the cases provided by or under ordinance, sitting in chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three magistrates other than the Chief Magistrate.

Finance

Until 1979 Norfolk Island revenue was supplemented by annual grants from the Commonwealth Government. Under present constitutional arrangements the cost of maintaining the island, other than the Administrator and his staff, is met as far as practicable from Island sources.

NORFOLK ISLAND: REVENUE AND EXPENDITURE

($'000)

	1977–78	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*
REVENUE						
Government grant	126	144	—	—	—	—
Customs duty	472	566	680	995	785	710
Liquor profit	233	285	332	339	287	288
Company fees	237	187	137	121	103	111
Sale of stamps	550	613	856	1,075	1,351	755
Vehicle registration and licence fees	73	77	77	81	57	92
All other	330	412	427	677	830	718
Total revenue	**2,021**	**2,284**	**2,509**	**3,288**	**3,413**	**2,674**
EXPENDITURE						
Administration	704	786	736	903	1,334	1,214
Education services	291	322	122	425	722	453
Health and welfare services	250	275	312	363	452	485
Repairs and maintenance	251	302	389	378	470	436
Capital works and services	124	252	252	353	317	210
Miscellaneous services	162	172	242	155	277	278
Legislative Assembly	n.a.	n.a.	92	234	110	183
Total expenditure	**1,782**	**2,109**	**2,145**	**2,811**	**3,682**	**3,261**

HEARD ISLAND AND McDONALD ISLANDS

These islands, about 4,100 kilometres south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act* 1953. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

In December 1947, an Australian scientific station was established on Heard Island. Meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the Island from time to time. Heard Island is about 43 kilometres long and 20 kilometres wide. The McDonald Islands are 43 kilometres to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island station.

AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adelie situated south of 60°S latitude and lying between 160°E longitude and 45°E longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adelie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60°S latitude lying between 136°E longitude and 142°E longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968 responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science (now the Minister for Science and Technology).

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on Mac.Robertson Land at latitude 67° 36'S and longitude 62° 53'E. The station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Scientific research (including meteorology, cosmic ray physics and glaciology) is conducted at Mawson, which is also a centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35'S and longitude 77° 58'E. The station was named in honour of the late Captain John King Davis, second-in-command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and re-opened on 15 February 1969. On 4 February 1959 the Commonwealth Government accepted from the United States Government custody of Wilkes station, which was established by the United States on 16 January 1957 on Vincennes Bay at latitude 66° 15'S and longitude 110° 32'E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1838–42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey station built about 2 kilometres south of Wilkes. Casey station, which was opened on 19 February 1969, was named in honour of Lord Casey, former Governor-General of Australia, in recognition of this long association with Australia's Antarctic effort.

In 1981/82 a ten-year program for redeveloping Australia's Antarctic stations began and is now well advanced. The stations act as bases for mounting inland programs and provide basic facilities for weather observations, communications and research.

The highest priority for research relates to the study of living and mineral resources of the Antarctic continent and off-shore areas and the environmental effects of their exploration and exploitation.

COCOS (KEELING) ISLANDS

General description

The Territory of the Cocos (Keeling) Islands comprises a group of 27 small coral islands in two separate atolls in the Indian Ocean, 2,768 kilometres north-west of Perth.

West Island, about 10 kilometres long, is the largest. The Territory's administrative community, airport and animal quarantine station are located there. The Cocos Malay community lives on Home Island.

The main atoll is low-lying, flat, and thickly covered by coconut palms, and surrounds a lagoon which has an anchorage in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about nine months of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable for those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 21°C and 32°C, and the average yearly rainfall is 1,998 millimetres. There are occasional violent storms.

History and administration

The islands were discovered in 1609 by Captain William Keeling of the East India Company, but were uninhabited until Alexander Hare and John Clunies-Ross established small settlements at different points on the main atoll in 1826 and 1827 respectively. Clunies-Ross secured sole possession in 1831 and the islands were declared part of the British Dominions in 1857. In 1878 responsibility for the supervision of the islands was transferred to the Government of Ceylon and eight years later, to the Government of the Straits Settlements.

In 1903 the islands were incorporated in the Settlement of Singapore but were attached again to Ceylon during the 1939–45 war while Singapore was under Japanese occupation.

By mutual agreement between the British and Australian Governments, and confirmed by complementary legislation, the islands became an Australian territory in 1955. The Australian Government purchased the Clunies-Ross interests in the Territory in 1978, except for the family home and grounds.

The Cocos (Keeling) Islands Act 1955 is the basis of the Territory's administrative, legislative and judicial systems.

An Administrator, appointed by the Governor-General and responsible to the Minister for Territories and Local Government, is the senior Government representative in the Territory.

A representative form of local government was established on 25 July 1979 when the Cocos (Keeling) Islands Council was elected by members of the Home Island community. The Council which has responsibility for a wide range of functions in the Home Island village area, advises the Administrator on local affairs, and is also empowered to make representations on ordinances proposed for the Territory.

The Cocos Islands Co-operative Society Limited, also established in 1979, conducts the business enterprises of the Cocos people. The Co-operative undertakes copra production, building maintenance and construction, and stevedoring and lighterage services.

The Territory's own postal service, including a philatelic bureau, was opened in 1979. The service, run by the Administration, provides local employment and its profits are directed to the Cocos (Keeling) Islands Council for use on community projects.

The population of the Cocos (Keeling) Islands at June 1983 was 579, distributed between Home Island (363) and West Island (216).

Transport and communication

There is an airport of international standard at West Island, controlled by the Administrator under licence from the Department of Transport. There is a regular Perth-Cocos (Keeling) Islands-Christmas Island-Perth charter service every 2 weeks. A shipping service operates to the Territory at intervals of several weeks. A radio telephone service between West Island and Perth is maintained by the Administration. There are local postal and telephone services, and a non-commercial broadcasting station.

CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10°25'S, longitude 105°40'E. It is approximately 360 kilometres south from Java Head at the south entrance to Sunda Strait, 1,300 kilometres from Singapore and 2,600 kilometres from Perth. Christmas Island covers an area of about 135 square kilometres. It consists of a central plateau about 150 to 250 metres above sea level with several prominent rises up to 360 metres high. The plateau descends to the sea in a series of steep slopes alternating with terraces. Sea cliffs over 200 metres high run along a considerable portion of the coastline except in a few places, the chief of which is Flying Fish Cove where the principal settlement is located and which is also the only anchorage.

The climate is pleasant, with prevailing winds coming from the south-east to east-south-east from May to December, and occasionally shifting round to between north and west from December to April (the wet season). The average yearly rainfall is about 2,673 mm with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 27°C, and does not vary greatly throughout the year.

Economy

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. During the year ended 30 June 1983, 1,017,000 tonnes of phosphate rock, were exported to Australia and New Zealand while 184,000 tonnes were exported elsewhere. Mining operations on Christmas Island are conducted by the Phosphate Mining Company of Christmas Island, Ltd (PMCI) a company wholly owned by the Australian Government currently as agents for the Christmas Island Phosphate Commission. To minimise the impact on the environment of mining, a program of land reclamation has been adopted and a nursery is maintained for reafforestation.

Population

Some 3,018 people (2,026 males and 992 females) were residents of the island at 30 June 1982. There is no indigenous population and many of the 2,666 Asian residents were either born in the Territory or have arrived over the past thirty years. Under the provisions of the Christmas Island Act and the Citizenship Act, most are Australian citizens, or permanent residents.

Education

The education system is based on an Australian curriculum. The Christmas Island Area School provides pre-school, primary and secondary education. The Christmas Island Technical School conducts trades and commercial courses, and provides adult education classes and supervision of correspondence courses from the Western Australian Education Department's Technical Extension Service. Some 600 students are enrolled in the Area School.

History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony (from 1 January 1958, pending transfer to Australia) are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to Australia by the *Christmas Island Act* 1958. The Territory is administered by an Administrator appointed by the Governor-General. Responsibility for the administration and government of the Territory rests with the Minister for Territories and Local Government and the Administrator administers the Territory in accordance with instructions given to him by the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia. They may be amended or repealed by Commonwealth Statutes.

Transport and communication

Sea transport to and from the Island is maintained by vessels operated under charter by the phosphate manufacturers and the PMCI.

An air charter arranged by the Department of Territories and Local Government provides a fortnightly service to and from the island out of Perth via the Cocos Islands. The PMCI operates a thrice fortnightly air charter between Singapore or Kuala Lumpur and the island.

The Territory has its own radio broadcasting station, police force, postal service and philatelic bureau. A radio-telephone and teleprinter service operates between the island and the mainland, and links with Singapore and ships at sea.

CORAL SEA ISLANDS

The Coral Sea Islands Territory comprises scattered reefs and islands, often little more than sandbanks, spread over a sea area of 1,035,995 square kilometres with only a few square kilometres of land area. The territory lies between the Great Barrier Reef and longitude 157°10'E and between latitude 12° and 24°S. Some of the better known islands in the Territory are Cato Island, Chilcott Islet in the Coringa Group and the islands of the Willis Group.

The islands, or cays, are formed largely of coral and sand and some have a cover of grassy or scrub-type vegetation. Large populations of sea birds nest and breed in the area.

History

About one hundred years ago guano workers camped on a number of the islands collecting manure deposited by the sea birds. Isolation, a lack of permanent fresh water and the limited size of the cays discouraged subsequent permanent occupation.

The Commonwealth Government based its claim to the Coral Sea Islands on numerous acts of sovereignty since early this century and asserted its sovereignty by enacting the *Coral Sea Islands Act* 1969 (which declared the Coral Sea Islands to be a Territory of Australia).

Installations

A lighthouse has been erected on Bougainville Reef and beacons operate on the Frederick and Lihou Reefs. A three-man meteorological station has provided a service on Willis Island since 1921 and there are eight automatic weather stations scattered throughout the Territory.

Most of the islands have been surveyed and the area is visited regularly both by Royal Australian Navy vessels and maintenance vessels of the Bureau of Meteorology.

Administration

By ordinance the laws of the Australian Capital Territory apply in the Coral Sea Islands Territory. The Minister for Territories and Local Government is responsible for matters affecting the Territory.

STATISTICAL SUMMARY: AUSTRALIA

In earlier issues of the Year Book, it was the practice to include in the Statistical Summary figures for every tenth year of the period 1861 to 1901, plus the latest year for which data were available. In each subsequent issue, the latest year available was substituted for the year immediately preceding it until the next tenth year had been reached, and the earliest year in the series was eliminated as space was needed. In consequence of this system, no single issue of the Year Book contained a continuous yearly series.

In recent issues of the Year Book, this defect has been remedied in part by the inclusion of a continuous series back to the year 1949 where possible, with earlier tenth years back to 1901. In this issue of the Year Book the time series has been altered to show a continuous series back to 1958 where possible, with earlier tenth years back to 1901. In issue No. 39, pages xxviii–xxix, some of the series are shown for every tenth year from 1861 to 1941. There are, however, discrepancies between the original series and the series now published.

Breaks in series, preliminary figures, etc., are indicated by the symbols shown on page xi of this Year Book.

DEMOGRAPHY

Year ended 31 December	*Population(a)*			*Natural increase*	*Net migration(b)*	*Marriages*		*Divorces (d)*	*Births*		*Deaths*		*Infant deaths*	
	Males	*Females*	*Persons*			*No.*	*Rate(c)*		*No.*	*Rate(c)*	*No.*	*Rate(c)*	*No.*	*Rate(e)*
	'000	'000	'000	'000	'000	'000		'000	'000		'000		'000	
1901 . .	2,005	1,820	3,825	56.6	3.0	28	7.3	-	103	27.2	46	12.2	10.7	103.6
1911 . .	2,382	2,192	4,574	74.3	74.4	39	8.8	1	122	27.2	48	10.7	8.4	68.5
1921 . .	2,799	2,712	5,511	82.1	17.5	47	8.6	1	136	25.0	54	9.9	9.0	65.7
1931 . .	3,333	3,220	6,553	61.9	10.1	39	6.0	2	119	18.2	57	8.7	5.0	42.1
1941 . .	3,599	3,545	7,144	59.1	(f) 6.9	75	10.6	3	135	18.9	75	10.6	5.3	39.7
1951 . .	4,311	4,217	8,528	111.5	108.9	77	9.2	7	193	23.0	82	9.7	4.9	25.2
1957 . .	4,930	4,814	9,744	135.4	77.8	74	7.6	6	220	22.9	85	8.8	4.7	21.4
1958 . .	5,026	4,921	9,947	138.8	64.5	74	7.5	7	223	22.6	84	8.5	4.6	20.5
1959 . .	5,132	5,029	10,161	137.8	75.8	74	7.4	7	227	22.6	89	8.9	4.9	21.5
1960 . .	5,253	5,139	10,392	141.9	89.1	75	7.3	7	230	22.4	88	8.6	4.6	20.2
1961 . .	(g) 5,374	(g) 5,268	(g) 10,643	(g) 151.8	58.7	77	7.3	7	240	22.8	89	8.5	4.7	19.5
1962 . .	5,470	5,376	10,846	144.4	59.0	79	7.4	7	237	22.2	93	8.7	4.8	20.4
1963 . .	5,572	5,484	11,055	141.3	68.1	81	7.4	8	236	21.6	95	8.7	4.6	19.5
1964 . .	5,683	5,597	11,280	129.1	95.8	86	7.7	8	229	20.6	101	9.0	4.4	19.1
1965 . .	5,794	5,712	11,505	123.7	101.3	94	8.2	9	223	19.6	100	8.8	4.1	18.5
1966 . .	5,891	5,814	11,705	119.2	80.2	(g) 96	(g) 8.3	10	(g) 224	(g) 19.3	(g) 105	(g) 9.0	(g) 4.2	(g) 18.7
1967 . .	5,992	5,920	11,912	126.6	80.8	100	8.5	10	229	19.4	103	8.7	4.2	18.3
1968 . .	6,108	6,037	12,146	131.4	102.0	106	8.8	11	241	20.0	110	9.1	4.3	17.8
1969 . .	6,238	6,169	12,407	143.7	118.0	112	9.2	11	250	20.4	106	8.7	4.5	17.9
1970 . .	6,365	6,299	12,663	144.5	111.8	116	9.3	12	258	20.6	113	9.0	4.6	17.9
1971 . .	(h) 6,632.8	(h) 6,565.5	(h) 13,198.4	165.7	103.6	118	(h) 9.0	13	276	(h) 21.1	111	(h) 8.5	4.8	17.3
1972 . .	6,735.7	6,673.6	13,409.3	155.2	56.3	114	8.6	16	265	19.9	110	8.3	4.4	16.7
1973 . .	6,835.5	6,778.9	13,614.3	136.8	67.5	113	8.3	16	248	18.3	111	8.2	4.1	16.5
1974 . .	6,941.9	6,890.0	13,832.0	129.3	87.2	111	8.1	18	245	17.9	116	8.4	4.0	16.1
1975 . .	7,002.2	6,966.6	13,968.9	124.0	13.5	104	7.5	24	233	16.8	109	7.8	3.3	14.3
1976 . .	7,065.8	7,044.3	14,110.1	115.1	34.0	110	7.8	(i) 63	228	16.2	113	8.0	3.2	13.8
1977 . .	7,145.4	7,136.1	14,281.5	117.5	68.0	105	7.4	45	226	15.9	109	7.7	2.8	12.5
1978 . .	7,123.6	7,217.3	14,430.8	115.8	47.4	103	7.2	41	224	15.6	108	7.5	2.7	12.2
1979 . .	7,293.3	7,309.1	14,602.5	116.6	68.6	104	7.2	38	223	15.4	107	7.3	2.5	11.4
1980 . .	7,391.4	7,415.9	14,807.4	116.8	100.9	109	7.4	39	226	15.3	109	7.4	2.4	10.7
1981 . .	7,511.1	7,538.4	15,049.5	126.8	121.8	114	7.6	41	236	15.8	109	7.3	2.3	10.0
1982p . .	7,624.0	7,652.1	15,276.1	125.1	101.5	117	7.7	44	240	15.8	115	7.6	2.5	10.3

(*a*) At 31 December. (*b*) Net overseas migration component used in population estimates. Prior to 30 June 1971, net migration includes discrepancies disclosed by the various censuses and is based on the excess of all arrivals over all departures. From 30 June 1971, net migration is defined as the excess of overseas arrivals over overseas departures classified as permanent and long-term (greater then one year). From 30 June 1976, net migration consists of net permanent and long-term movement and an adjustment for the net effect of changes in travel intentions which affect the categorization of movements. (*c*) Number per 1,000 of mean population. (*d*) Includes decrees made absolute and nullities of marriage up to and including 1946. From 1947 excludes nullities of marriage. (*e*) Number per 1,000 live births. (*f*) Excludes movements of defence personnel from September 1939 to June 1947. (*g*) Includes Aboriginals. (*h*) Figures for 1971 and later years are based on the estimated resident population introduced after the 1981 Census. Populations and rates for 1976 to 1981 have been recalculated using final 1981 Census results. (*i*) Introduction of Family Law Act.

SOCIAL

PENSIONS, BENEFITS, ETC.

Year ended 30 June	Age and invalid pensions (including Wives' Allowances Pensions)			Family allowances (a)		Widow's pensions		Unemployment benefits	
	Pensioners (b)	No. of wives (c)	Amount paid (d)	No. of children (b)	Amount paid	Pensioners (b)	Amount paid (d)	No. on benefit—weekly average	Amount paid (d)
	'000	'000	$m	'000	$m	'000	$m	'000	$m
1902	..	..	..	..	..	..	..	..	..
1912	90	..	4.3	..	..	..	..	..	..
1922	147	..	10.8	..	..	..	..	..	..
1932	261	..	22.3	.	..	..	..	..	..
1942	341	..	38.5	910	22.6	..	..	..	..
1952	426	11	119.6	2,518	93.2	41	11.2	2	(f)
1958	574	12	243.2	3,074	117.5	47	19.7	24	9.8
1959	598	12	259.1	3,172	(e)135.1	50	21.6	28	11.9
1960	619	13	294.0	3,252	125.1	52	24.3	21	9.0
1961	651	14	315.9	3,340	(e)148.6	55	26.9	22	8.9
1962	691	14	360.5	3,420	132.8	57	30.2	53	25.3
1963	711	15	375.5	3,458	135.4	58	31.4	40	21.3
1964	725	16	399.9	3,631	(e)168.8	62	41.6	26	13.5
1965	736	16	426.6	3,711	172.8	65	47.0	14	6.8
1966	744	17	442.4	3,763	176.4	69	50.0	15	7.8
1967	764	19	481.8	3,835	(e)199.3	73	56.4	21	11.2
1968	797	19	514.0	3,891	187.9	75	61.1	21	11.2
1969	827	20	558.6	3,996	193.3	78	69.1	18	9.3
1970	913	23	642.0	4,079	(e)220.1	87	81.8	13	8.9
1971	942	23	702.3	4,156	198.5	90	90.5	15	10.8
1972	972	24	818.5	4,235	216.6	93	104.6	29	26.0
1973	1,081	41	1,072.4	4,239	(e)253.9	106	140.5	40	46.6
1974	1,184	47	1,372.4	4,261	225.4	115	181.0	34	58.2
1975	1,266	51	1,918.9	4,284	224.9	121	241.4	117	251.7
1976	1,342	59	2,536.4	4,293	(e)265.5	129	325.3	192	513.9
1977	1,408	69	2,994.6	4,302	1,023.3	139	370.2	216	618.1
1978	1,469	78	3,532.3	4,304	1,038.1	150	439.5	266	794.1
1979	1,512	86	3,919.4	4,231	(g)974.9	161	499.3	(h)306	910.0
1980	1,551	91	4,305.1	4,224	(i)1,035.4	166	561.4	(j)306	925.2
1981	1,569	86	4,816.5	4,227	950.4	166	641.8	(j)310	995.7
1982	1,584	82	5,484.1	4,254	1,041.8	164	717.4	(b)332	1,224.3
1983	1,611	83	5,935.9	4,303.3	1,373.7	165	758.1	540	2,249.0

Year ended 30 June	Hospital and nursing home benefits amount paid	Medical benefits—amount paid	Pharmaceutical benefits—amount paid	Total Commonwealth Government expenditure on pensions, benefits, etc. (k)	Disability pensions paid to veterans and dependants		Service pensions paid to veterans and dependants	
					No. (b)	Amount paid	No (b)	Amount paid
	$m	$m	$m	$m	'000	$m	'000	$m
1902	..	..	..	..	..	..	..	..
1912	..	..	..	4.3	..	..	..	..
1922	..	..	..	12.1	225	14.1	..	..
1932	..	..	..	23.0	274	14.9	..	..
1942	..	..	..	61.8	220	15.0	14	1.2
1952	13.4	2.1	15.4	275.2	525	66.7	17	3.6
1958	21.6	20.6	30.1	495.0	629	106.6	42	11.3
1959	29.6	23.2	41.9	556.5	643	109.0	44	12.4
1960	37.2	26.8	48.7	598.7	655	117.5	46	13.5
1961	41.3	28.4	55.8	661.2	662	132.6	50	15.6
1962	44.4	30.6	70.4	730.4	671	135.1	58	19.4
1963	47.3	32.6	76.9	758.6	671	140.7	62	21.7
1964	56.2	34.4	78.8	832.7	669	154.5	65	24.2
1965	58.8	44.6	82.2	890.4	660	153.5	65	25.5
1966	60.7	54.6	91.8	941.6	647	170.5	66	28.2
1967	67.4	58.2	101.3	1,031.1	632	161.7	67	29.1
1968	74.8	62.5	105.1	1,075.0	617	164.4	69	31.8
1969	85.9	66.5	118.4	1,162.3	601	182.8	67	34.1
1970	111.4	76.1	136.7	1,341.8	585	183.5	74	39.9
1971	122.8	115.5	160.3	1,477.2	570	191.4	77	43.7
1972	162.0	160.4	173.3	1,752.3	553	211.1	78	49.2
1973	198.9	191.1	177.6	2,197.4	546	225.0	96	72.3
1974	226.5	198.9	218.3	2,666.2	532	252.2	109	103.6
1975	292.8	243.6	262.3	3,691.0	514	314.1	122	155.2
1976	254.1	(l)707.4	283.8	4,658.4	499	340.1	142	218.9
1977	195.4	(l)551.8	234.9	5,925.4	485	371.5	164	283.3
1978	188.5	(l)359.8	256.0	6,794.8	463	419.0	189	372.1
1979	200.2	(l)528.8	271.3	7,365.0	448	415.3	212	436.0
1980	227.4	(l)621.0	274.6	8,307.1	435	432.0	240	525.0
1981	277.8	682.9	309.2	9,367.5	423	496.3	272	686.5
1982	407.3	772.8	390.8	10,836.6	413	510.7	300	807.5
1983	511.9	916.8	430.3	11,874.4	410	646.5	341	1,058.0

(a) Previously child and student endowment. (b) At 30 June. (c) Wives allowance commenced on 8 July 1943 and was replaced by wives pension on 5 October 1972. (d) Includes expenditure on additional pension/benefit for children. (e) Five 12-weekly payments made during the year instead of the normal four. (f) Less than $0.05 million. (g) Does not include $22,714,000 paid in respect of family allowance payday 3 July 1979. (h) Estimate used for Western Australia. (i) Includes $22,714,000 paid during 1978-79 in respect of family payday 3 July 1979. (j) Estimated. (k) National Welfare Fund items only, including expenditure for all years on pensions, benefits, etc. which subsequently became payable from the National Welfare Fund. In addition to the items shown in the preceding columns, the tables include expenditure on the rehabilitation service; milk for school children; tuberculosis campaign; sickness, special and funeral benefits and some miscellaneous welfare and health services. Excludes war and service pensions, telephone rental concessions for pensioners and some minor welfare and health services. (l) Medical benefits applicable to the period 1976-79 were funded from both National Welfare fund and consolidated revenue.

SOCIAL—*continued*

EDUCATION

POLICE AND PRISONS

	Schools (b)							
	Government		Non-government		Universities			
Year(*a*)	*Number*	*Pupils*	*Number*	*Pupils*	*Number*	*Students*	*Police*(*c*)	*Convicted Prisoners*
	'000	'000	'000	'000		'000	'000	'000
1902	7.2	637	2.4	144	4	1.9	5.9	4.2
1912	8.4	663	1.9	164	6	3.8	6.6	3.4
1922	9.6	837	1.7	202	6	7.8	7.0	3.0
1932	10.2	934	1.8	221	6	9.9	8.6	4.1
1942	9.0	868	1.8	250	6	10.8	9.7	3.5
1952	7.6	1,145	1.9	348	8	29.6	12.6	4.8
1958	7.8	1,496	2.0	471	9	41.5	14.5	6.6
1959	7.8	1,558	2.1	489	9	47.2	14.9	6.6
1960	7.9	1,613	2.1	511	9	53.4	15.3	6.8
1961	7.9	1,664	2.1	527	9	57.7	15.9	7.2
1962	7.9	1,711	2.2	540	10	63.3	16.4	7.4
1963	7.9	1,754	2.2	553	10	69.1	16.7	7.7
1964	7.9	1,799	2.2	565	10	76.2	17.2	7.7
1965	7.8	1,855	2.2	580	11	83.3	17.6	7.7
1966	7.8	1,919	2.2	583	13	91.3	18.4	8.1
1967	7.7	1,991	2.2	595	14	95.4	19.0	8.7
1968	7.6	2,055	2.2	601	14	101.5	19.7	8.8
1969	7.5	2,114	2.2	603	14	109.7	20.1	9.2
1970	7.5	2,160	2.2	608	15	116.8	20.3	9.3
1971	7.4	2,197	2.2	611	15	123.8	21.0	9.5
1972	7.4	2,229	2.2	612	15	128.7	22.2	9.8
1973	7.3	2,241	2.2	613	15	133.1	23.1	9.1
1974	7.3	2,253	2.2	618	17	142.9	24.4	7.6
1975	7.3	2,290	2.1	620	18	148.3	25.7	7.8
1976	7.3	2,323	2.1	624	18	154.0	26.3	8.0
1977	7.3	2,349	2.1	630	19	158.4	27.4	8.1
1978	7.4	2,354	2.1	638	19	160.0	27.9	8.7
1979	7.4	2,337	2.2	650	19	160.8	31.0	9.4
1980	7.4	2,318	2.2	666	19	163.2	31.6	8.8
1981	7.5	2,299	2.3	688	19	166.6	32.3	n.a
1982	7.6	2,283	2.3	712	19	167.4	32.7(*d*)	9.8

(*a*) Years ended at varying dates for education statistics. Years ended 30 June for Police and Prisons. (*b*) From 1974, all pre-primary education undertaken on a sessional basis or in a recognised pre-school class of a primary/secondary school has been excluded. (*c*) Excludes Commonwealth Police from 1902 to 1978 inclusive. (*d*) Includes unsentenced prisoners on remand.

INDUSTRIES

PASTORAL, DAIRYING, ETC.

	Livestock(*a*)						*Meat*(*d*)			
Year ended 30 June	*Cattle*	*Sheep*	*Pigs*	*Wool (b)(c)*	*Butter*	*Cheese*	*Beef and veal*	*Mutton and lamb*	*Pigmeat*	*Total meat*
	mil.	mil.	mil.	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
1902	8.5	72	0.9	245	(*e*)46	(*e*)5.3	n.a.	n.a.	n.a.	n.a.
1912	11.8	97	1.1	362	(*e*)96	(*e*)7.2	n.a.	n.a.	n.a.	n.a.
1922	14.4	86	1.0	328	(*e*)121	(*e*)14.8	345	222	51	618
1932	12.3	111	1.2	457	177	14.3	355	312	72	739
1942	13.6	125	1.4	529	170	30.6	542	378	124	1,043
1952	14.9	118	1.0	490	137	41.3	591	287	86	964
1958	16.9	149	1.4	650	179	36.6	804	428	103	1,336
1959	16.3	153	1.3	722	197	44.5	921	500	104	1,525
1960	16.5	155	1.4	762	201	45.7	764	583	102	1,449
1961	17.3	153	1.6	737	185	47.9	643	584	109	1,336
1962	18.0	158	1.7	770	202	56.6	804	596	122	1,522
1963	18.5	159	1.4	759	206	59.6	929	603	116	1,648
1964	19.1	165	1.5	810	207	59.2	1,001	595	113	1,710
1965	18.8	171	1.7	809	206	62.6	1,026	594	122	1,743
1966	17.9	158	1.7	754	209	59.6	946	608	135	1,690
1967	18.3	164	1.8	799	222	69.8	879	596	142	1,617
1968	19.2	167	2.1	803	196	70.5	904	665	150	1,718
1969	20.6	175	2.3	883	198	74.8	935	680	162	1,777
1970	22.2	180	2.4	926	223	76.3	1,010	755	174	1,940
1971	24.4	178	2.6	890	203	77.6	1,047	825	182	2,054
1972	27.4	163	3.2	882	195	80.9	1,168	956	194	2,319
1973	29.1	140	3.3	735	185	93.4	1,438	713	236	2,388
1974	30.8	145	2.5	701	175	95.8	1,322	467	211	2,000
1975	32.8	152	2.2	793	(*f*)161	(*f*)98.6	1,547	528	175	2,249
1976	33.4	149	2.2	754	148	112.6	1,840	588	174	2,602
1977	31.5	135	2.2	703	118	103.5	1,988	549	185	2,722
1978	29.3	131	2.2	677	112	115.7	2,184	514	199	2,897
1979	27.1	134	2.3	704	105	141.8	2,018	491	199	2,708
1980	26.2	136	2.5	709	84	154.2	1,564	547	218	2,330
1981	25.2	134	2.4	701	79	136.7	1,467	578	233	2,278
1982	24.6	138	2.4	717	76	15.3	1,573	506	228	2,307
1983	22.5	133	2.5	700	80	160	1,542	527	235	2,307

(*a*) At 31 December of previous year for years to 1942, at 31 March thereafter. (*b*) In terms of greasy. (*c*) 1901–02 and 1911–12 year ended previous December; then until 1946–47 year ended March; 1947–48 onwards, year ended June. (*d*) Carcass weight in terms of fresh meat. (*e*) Year ended previous December. (*f*) From 1974–75 excludes the production of certain small producers.

INDUSTRIES—*continued*

AGRICULTURE

	Wheat for grain			*Oats for grain*			*Barley for grain*			*Maize*		
Season	*Area*	*Production*	*Average yield*	*Area*	*Production*	*Average yield*	*Area*	*Production*	*Average yield*	*Area*	*Production*	*Average yield*
	mil hectares	mil tonnes	tonnes	'000 hectares	mil tonnes	tonnes	'000 hectares	mil tonnes	tonnes	'000 hectares	mil tonnes	tonnes
1901 02	2.07	1.05	0.51	187	0.18	0.95	30	0.03	1.14	119	0.18	1.50
1911 12	3.01	1.95	0.65	250	0.17	0.70	47	0.05	0.99	138	0.23	1.65
1921 22	3.93	3.51	0.89	297	0.22	0.74	121	0.14	1.14	124	0.20	1.61
1931 32	5.97	5.18	0.87	439	0.28	0.63	139	0.14	1.03	109	0.18	1.65
1941 42	4.86	4.53	0.93	591	0.40	0.68	317	0.41	1.29	122	0.19	1.55
1951 52	4.20	4.34	1.03	957	0.63	0.65	452	0.50	1.10	69	0.10	1.49
1958 59	4.21	5.84	1.39	1,608	1.58	0.98	963	1.43	1.48	73	0.17	2.35
1959 60	4.93	5.39	1.09	1,226	0.85	0.69	963	0.78	0.81	75	0.17	2.28
1960 61	5.44	7.43	1.37	1,472	1.38	0.94	1,145	1.54	1.35	75	0.16	2.12
1961 62	5.96	6.71	1.13	1,253	1.00	0.80	965	0.94	0.98	85	0.19	2.18
1962 63	6.66	8.34	1.25	1,332	1.25	0.94	820	0.90	1.09	85	0.19	2.23
1963 64	6.67	8.91	1.34	1,373	1.24	0.90	815	0.98	1.21	87	0.17	1.96
1964 65	7.25	10.02	1.38	1,415	1.27	0.90	835	1.12	1.34	86	0.17	2.03
1965 66	7.09	7.05	1.00	1,525	1.10	0.72	930	0.95	1.02	80	0.12	1.57
1966 67	8.43	12.67	1.50	1,723	1.94	1.13	1,011	1.40	1.38	82	0.19	2.33
1967 68	9.08	7.55	0.83	1,368	0.72	0.53	1,057	0.83	0.79	81	0.18	2.23
1968 69	10.85	14.80	1.37	1,567	1.71	1.09	1,341	1.65	1.23	67	0.15	2.24
1969 70	9.49	10.55	1.11	1,374	1.25	0.91	1,521	1.70	1.12	80	0.19	2.41
1970 71	6.48	7.89	1.22	1,484	1.61	1.09	2,000	2.35	1.18	85	0.21	2.48
1971 72	7.14	8.61	1.21	1,237	1.28	1.03	2,532	3.66	1.21	78	0.21	2.74
1972 73	7.60	6.59	0.87	995	0.74	0.74	2,140	1.73	0.81	59	0.14	2.34
1973 74	8.95	11.99	1.34	1,182	1.11	0.94	1,894	2.40	1.27	46	0.11	2.32
1974 75	8.31	11.36	1.37	897	0.87	0.97	1,826	2.52	1.38	51	0.13	2.59
1975 76	8.56	11.98	1.40	988	1.14	1.15	2,329	3.18	1.36	47	0.13	2.81
1976 77	8.96	11.80	1.32	995	1.07	1.08	2,321	2.85	1.23	53	0.14	2.72
1977 78	9.95	9.37	0.94	1,076	0.99	0.92	2,803	2.38	0.85	45	0.13	2.87
1978 79	10.25	18.09	1.77	1,359	1.76	1.30	2,785	4.01	1.44	50	0.17	3.38
1979 80	11.15	16.19	1.45	1,123	1.41	1.26	2,482	3.70	1.49	54	0.15	2.79
1980 81	11.28	10.86	0.96	1,093	1.13	1.03	2,451	2.68	1.09	56	0.17	3.06
1981 82	11.88	16.36	1.38	1,388	1.62	1.17	2,685	3.45	1.29	61	0.21	3.48
1982 83	11.55	8.90	0.77	1,213	0.83	0.68	2,454	1.80	0.73	59	NYA	NYA

	Hay			*Potatoes*			*Sugar-cane(a)*			*Vineyards*		*All crops*
Season	*Area*	*Production*	*Average yield*	*Area*	*Production*	*Average yield*	*Area*	*Production*	*Average yield*	*Area*	*Wine made*	*Area*
	'000 hectares	'000 tonnes	tonnes	'000 hectares	'000 tonnes	tonnes	'000 hectares	'000 tonnes	tonnes	'000 hectares	mil. litres	mil. hectares
1901 02	683	2,057	3.01	44	328	7.4	35	1,390	39.5	26	24	3.4
1911 12	1,019	2,914	2.86	53	306	5.8	41	1,709	41.8	25	23	4.9
1921 22	1,212	3,965	3.27	60	394	6.5	52	2,476	47.7	37	39	6.2
1931 32	1,066	3,218	3.02	59	403	6.9	98	4,281	43.8	46	65	8.6
1941 42	1,116	3,632	3.25	40	338	8.4	103	5,236	50.8	53	71	(*b*)8.3
1951 52	627	2,382	3.80	48	517	10.8	114	5,412	47.5	55	160	(*b*)8.1
1958 59	1,221	5,171	4.23	42	584	13.8	150	10,377	69.4	53	148	10.4
1959 60	852	3,227	3.79	44	589	13.4	127	9,147	72.0	53	129	10.6
1960 61	1,203	5,160	4.29	37	458	12.3	138	9,313	67.5	53	153	12.0
1961 62	920	3,752	4.08	38	534	14.0	157	9,730	62.1	54	190	12.0
1962 63	1,101	4,793	4.35	46	677	14.7	163	12,940	79.6	54	136	13.0
1963 64	1,053	4,338	4.12	41	571	13.8	169	12,313	72.9	55	172	13.0
1964 65	1,130	5,043	4.46	36	516	14.5	190	15,312	80.4	56	177	14.0
1965 66	1,125	4,246	3.77	39	649	16.7	204	14,382	70.6	57	156	14.0
1966 67	1,415	6,473	4.58	40	653	16.3	226	16,953	75.1	56	190	16.0
1967 68	502	1,246	2.48	43	669	15.6	224	17,025	76.1	57	202	14.6
1968 69	428	1,728	4.04	46	811	17.7	230	18,708	81.3	58	236	16.7
1969 70	428	1,514	3.54	43	762	17.6	213	15,784	74.2	61	288	15.7
1970 71	348	1,298	3.73	39	774	20.1	221	17,645	80.0	64	250	13.4
1971 72	340	1,246	3.66	40	822	20.3	234	19,391	83.0	67	289	14.2
1972 73	453	1,224	2.70	37	721	19.7	242	18,928	78.3	69	266	14.3
1973 74	325	1,034	3.18	34	649	19.0	226	19,278	85.4	70	295	15.1
1974 75	216	669	3.10	38	742	19.7	253	20,418	80.7	71	361	13.8
1975 76	230	738	3.21	33	696	20.9	257	21,959	85.5	70	356	14.5
1976 77	287	891	3.10	34	728	21.5	288	23,344	81.0	71	383	15.0
1977 78	313	795	2.54	36	772	21.4	295	23,493	79.6	71	340	16.9
1978 79	293	955	3.26	35	795	23.0	252	21,457	85.2	71	335	17.5
1979 80	265	819	3.09	37	857	23.4	267	21,510	79.2	70	414	18.1
1980 81	320	814	2.54	36	866	24.2	288	23,976	83.2	70	374	18.4
1981 82	380	1,033	2.72	36	919	25.4	316	25,094	79.4	68	403	19.6
1982 83	404	864	2.14	38	NYA	NYA	319	24,785	77.7	68	NYA	19.4

(*a*) Cane cut for crushing. (*b*) Excludes Northern Territory.

INDUSTRIES—*continued*

GROSS VALUE OF PRODUCTION OF PRIMARY INDUSTRIES

Year ended 30 June—	*Crop production*	*Pastoral*	*Dairying*	*Poultry*	*Bee-farming*	*Total agri-culture*	*Hunting*	*Forestry*	*Fishing*	*Total primary excluding mining*
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
1902	47.6	54.4	15.2	4.0	0.2	121.4	n.a.	(a)5.6	(b)	127.0
1912	77.6	105.4	32.2	8.0	0.2	223.4	n.a.	9.6	2.2	235.2
1922	163.8	150.2	70.6	18.0	0.2	402.8	n.a.	18.2	2.8	423.8
1932	149.0	123.1	66.1	17.1	0.2	355.5	3.2	15.4	3.3	377.4
1942	201.0	198.7	91.1	24.8	0.9	516.4	10.8	23.3	4.2	554.7
1952	664.3	899.6	260.6	97.0	1.7	1,923.3	14.8	82.7	13.3	2,034.1
1958	681.7	1,089.8	370.7	110.9	3.8	2,256.9	13.7	114.1	22.8	2,407.5
1959	919.9	1,076.1	400.7	109.6	3.8	2,509.9	14.3	116.4	24.5	2,665.1
1960	820.7	1,275.2	425.4	119.7	5.1	2,646.1	15.4	108.1	27.2	2,796.8
1961	1,071.4	1,130.6	409.5	130.2	3.8	2,745.4	14.8	108.4	28.5	2,897.1
1962	1,008.3	1,187.3	412.5	121.7	4.0	2,733.9	13.3	100.1	31.7	2,879.0
1963	1,136.6	1,287.1	439.4	123.6	3.5	2,990.2	12.8	101.6	34.1	3,138.7
1964	1,228.4	1,562.7	463.5	138.2	6.0	3,398.9	15.0	108.0	35.4	3,557.3
1965	1,320.0	1,454.5	505.3	137.4	5.1	3,422.3	14.6	116.3	42.4	3,595.6
1966	1,181.3	1,467.8	508.0	154.6	4.3	3,316.0	15.6	120.3	45.8	3,497.7
1967	1,639.3	1,486.1	523.8	171.6	4.0	3,824.7	13.5	117.7	48.8	4,004.7
1968	1,268.8	1,395.2	504.1	169.3	4.6	3,342.1	12.1	118.8	58.5	3,531.5
1969	1,717.3	1,536.8	513.7	176.2	3.0	3,947.0	12.1	119.5	63.0	4,141.6

(a) Includes Fishing. (b) Included in Forestry.

The classification categories 'Pastoral', 'Dairying', 'Poultry' and 'Bee-farming' employed in the previous table have been replaced by a more appropriate commodity classification. Direct comparison with figures for previous years is not possible.

GROSS VALUE OF PRODUCTION OF PRIMARY INDUSTRIES

Year ended 30 June—	*Crops*	*Livestock slaughtering and other disposals(a)*	*Livestock products*	*Total agriculture*	*Forestry*	*Fishing*	*Hunting*
	$m	$m	$m	$m	$m	$m	$m
1971	1,490.8	1,009.9	1,079.0	3,579.7	137.2	77.2	10.2
1972	1,597.6	1,134.4	1,235.6	3,967.7	151.2	92.1	10.2
1973	1,582.4	1,542.2	1,832.5	4,957.1	170.6	100.7	12.1
1974	2,858.7	1,696.0	1,857.0	6,411.7	193.3	109.3	12.5
1975	3,203.8	1,019.2	1,653.1	5,876.0	212.6	107.7	13.8
1976	3,248.2	1,246.4	1,678.1	6,172.7	227.1	146.6	18.0
1977	3,189.7	1,685.7	1,881.2	6,756.6	251.7	206.3	23.5
1978	3,047.0	1,954.4	1,970.4	6,971.8	263.4	233.4	27.1
1979	4,912.5	3,097.7	2,214.5	10,224.7	276.8	279.7	38.1
1980	5,540.8	3,658.8	2,564.3	11,763.9	357.4	317.5	38.0
1981	5,305.9	3,474.3	2,803.8	11,584.1	(b)	(b)	(b)
1982	6,311.9	3,295.6	3,100.6	12,708.2	. .	. .	. .
1983 (p)	4,801.4	3,265.9	3,119.7	11,187.0	. .	. .	. .

(a) Includes adjustment for net exports (overseas and interstate) of live animals. (b) No longer collected. 1979 80 final year.

INDUSTRIES—*continued*

MINERALS / FORESTRY

Year ended 31 December—	Copper (a)	Gold (a)	Lead (a)	Zinc (a)	Iron ore	Black coal	Brown coal	Crude oil	Year ended 30 June—	Sawn output of Aust. grown timber
	'000 tonnes	'000 kg	'000 tonnes	'000 tonnes	mil. tonnes	mil. tonnes	mil. tonnes	'000 cu m		'000 cu m
1901	29.9	102,642	n.a.	(b)	n.a.	7.0		..	1902	(c)1,067
1911	46.1	77,263	225.3	241.9	(b)	10.7		..	1912	(c)1,428
1921	11.2	23,577	82.3	141.7	0.7	13.1		...	1922	1,392
1931	13.9	18,510	150.8	75.4	(b)	10.8		..	1932	559
1941	22.7	46,553	295.7	251.2	2.5	19.1		..	1942	2,157
1951	18.4	27,855	215.4	192.3	2.5	25.9		..	1952	3,287
1958	76.9	34,338	333.6	298.4	4.0	32.6		..	1959	3,445
1959	96.5	33,751	321.4	279.8	4.2	33.9		..	1960	3,589
1960	111.2	33.800	313.1	322.6	4.4	38.1		..	1961	3,346
1961	97.2	33,476	274.0	316.2	5.4	40.9		..	1962	3,190
1962	108.7	33,245	376.0	342.9	4.9	42.3		..	1963	3,341
1963	114.8	31,849	416.9	357.1	5.6	44.0		..	1964	3,509
1964	105.7	29,979	380.9	350.1	5.8	47.2		198	1965	3,615
1965	91.8	27,298	367.9	354.8	6.8	52.9		417	1966	3,558
1966	111.3	28,521	370.8	375.3	11.1	56.0		539	1967	3,448
1967	91.8	25,049	381.8	407.0	17.3	59.0		1,208	1968	3,476
1968	109.6	24,316	388.8	422.4	26.6	64.2		2,206	1969	(d)3,325
1969(e)	125.3	22,711	417.7	463.2	32.5	43.3	23.1	2,237	1970	(d)3,386
1970(e)	142.3	20,605	459.4	520.8	45.1	48.5	23.9	4,871	1971	3,438
1971(e)	173.0	19,103	416.4	444.1	57.1	49.7	22.8	14,937	1972	3,367
1972(e)	171.9	23,253	420.8	497.5	62.1	53.5	23.3	19,038	1973	3,408
1973(e)	198.7	20,002	385.0	507.0	74.6	59.8	24.1	20,669	1974	3,336
1974(e)	246.7	16,271	370.4	441.3	91.5	59.3	26.3	23,096	1975	3,230
1975(e)	235.6	15,153	416.5	508.2	98.2	70.1	27.3	23,096	1976	3,228
1976(e)	218.3	16,901	396.7	479.3	92.7	69.3	29.2	23,839	1977	3,164
1977(e)	217.2	15,666	418.2	475.3	94.8	76.0	31.0	24,549	1978	3,056
1978(e)	217.1	21,047	418.8	484.4	89.9	79.3	30.5	24,941	1979	3,110
1979(e)	238.7	19,584	423.5	498.5	84.6	81.2	32.1	24,839	1980	3,279
1980(e)	235.1	18,272	n.p.	518.0	97.0	81.2	32.9	23,647	1981	3,407
1981(e)	246.4	15,991	381.4	581.9	93.8	96.1	32.1	22,095	1982	3,219
1982(e)	259.6	22,328	454.8	623.9	86.8	99.4	37.6	(f)22,313	1983	2,962

(*a*) Metallic content of minerals produced. (*b*) Less than 0.05. (*c*) Year ended previous December. (*d*) Excludes estimated quantity of timber from logs peeled or sliced for veneers. (*e*) Year ended 30 June. (*f*) Includes natural gas condensate.

FACTORIES (*a*)

Year ended 30 June—	Number	Persons employed (b)	Salaries and wages paid(c)	Net value of production(d): Chemicals, etc.	Industrial metals, etc.	Textiles, etc.	Clothing	Food, etc.	Paper, etc.	All groups
	'000	'000	$m	$m	$m	$m	$m	$m	$m	$m
1902(e)	(f)	(f)	(f)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	58.2
1912(e)	14.5	312	55	2.2	24.1	15.0		23.6	8.5	108.3
1922	18.0	379	136	6.4	47.2	38.4		54.4	18.0	225.0
1932	21.7	337	112	15.8	45.6	13.8	22.2	57.4	19.2	222.0
1942	27.0	725	360	59.6	239.8	42.0	47.2	106.4	34.2	633.0
1952	45.8	978	1,224	127.4	826.2	113.2	162.2	282.2	136.4	2,049.7
1958	54.0	1,074	1,859	291.3	1,389.0	183.0	216.1	449.9	241.4	3,457.4
1959	54.9	1,088	1,941	322.4	1,471.6	191.3	221.5	469.1	263.4	3,685.2
1960	56.7	1,132	2,173	360.3	1,700.4	216.7	237.7	520.1	298.2	4,161.1
1961	57.8	1,145	2,289	366.1	1,795.9	213.6	247.2	542.5	318.6	4,349.8
1962	58.5	1,121	2,287	364.3	1,770.3	211.2	252.4	495.5	326.9	4,394.6
1963	59.1	1,168	2,447	411.4	1,954.7	233.8	266.3	636.9	350.9	4,795.2
1964	59.4	1,210	2,652	449.5	2,174.0	252.5	281.4	700.5	379.7	5,270.0
1965	61.0	1,269	2,994	504.8	2,486.1	279.6	302.3	757.1	426.9	5,896.8
1966	61.7	1,294	3,163	542.7	2,647.8	282.8	319.0	818.3	459.5	6,251.9
1967	62.5	1,309	3,408	627.6	2,912.9	303.1	341.5	892.3	503.3	6,877.0
1968	63.0	1,331	3,666	687.0	3,163.6	315.0	360.1	937.5	549.0	7,430.9
1969(g)	35.9	1,264	3,908	633.0	3,201.6	301.0	409.2	1,184.4	620.7	7,475.5
1970	35.7	1,297	4,329	681.8	3,551.9	310.3	452.1	1,321.9	701.8	8,261.7
1971	No manufacturing census was conducted in respect of this year.									
1972	36.1	1,303	5,257	804.1	4,052.0	333.7	521.5	1,683.9	818.1	9,703.2
1973	36.4	1,298	5,820	885.5	4,337.7	376.8	563.9	1,943.5	915.4	10,746.0
1974	37.1	1,338	7,177	1,076.2	5,529.4	481.1	676.1	2,126.0	1,110.5	13,149.2
1975(h)	27.0	1,245	8,531	1,172.2	6,635.8	409.2	696.8	2,650.5	1,279.4	15,246.4
1976(h)	27.5	1,200	9,472	1,261.7	7,084.9	542.3	841.7	3,074.1	1,391.4	16,921.0
1977(h)	26.8	1,176	10,536	1,464.6	8,088.5	563.1	894.2	3,501.8	1,614.2	19,234.3
1978(h)	26.1	1,144	11,136	1,697.4	8,217.9	581.4	967.7	3,767.4	1,763.0	20,236.3
1979(h)	26.3	1,144	11,966	1,898.8	9,180.2	641.5	1,049.4	4,035.5	1,960.8	22,230.1
1980(h)	27.4	1,154	13,358	2,201.4	10,887.8	708.4	1,130.7	4,413.8	2,248.4	25,614.0
1981(h)	27.7	1,150	14,911	2,513.3	11,843.8	769.4	1,267.1	5,023.5	2,568.1	28,531.1
1982	28.7	1,155	17,001	2,766.6	12,996.3	855.6	1,380.2	5,324.8	2,984.2	31,377.7

(*a*) Excludes Northern Territory and Australian Capital Territory before 1 July 1964. (*b*) Average over whole year, includes working proprietors. (*c*) Excludes amounts drawn by working proprietors. (*d*) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (*e*) Year ended previous December. (*f*) Owing to variation in classification, effective comparison is not possible. (*g*) Direct comparison with figures for previous years are not possible (for details, *see* page 411). (*h*) All manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed.

INDUSTRIES, WAGES AND PRICES

	GROSS VALUE OF PRODUCTION		BUILDING			WAGES AND PRICES			
			New dwellings completed(a)						
Year ended 30 June—	*Mining and quarrying*	*Manu-facturing*	*Number*	*Value*	*Value of work done on all buildings(b)*	*Year ended 31 December—*	*Weekly wage rates index adult males(c)*	*Award rates of pay index: weekly rates, adult males(d)*	*Retail price index numbers six State capital cities combined(e)*
	$m	$m	'000	$m	$m				
1902 . . .	44.0	(*f*)58.2	n.a.	n.a.	n.a.	1901	n.a.	. .	88
1912 . . .	46.6	(*f*)108.3	n.a.	n.a.	n.a.	1911	n.a.	. .	100
1922 . . .	40.0	225.0	n.a.	n.a.	n.a.	1921	n.a.	. .	(*i*)168
1932 . . .	27.0	220.0	n.a.	n.a.	n.a.	1931	n.a.	. .	145
1942 . . .	66.8	633.0	n.a.	n.a.	n.a.	1941	38.5	. .	167
						1951	85.8	. .	313
1952 . . .	194.4	2,049.7	80.1	354.1	n.a.				
						1958	114.3	. .	435
1959 . . .	236.7	3,685.2	84.2	527.3	864.9	1959	122.0	. .	443
1960 . . .	252.3	4,161.1	90.0	571.0	1,001.6	1960	125.7	. .	459
1961 . . .	278.1	4,349.8	94.5	627.4	1,130.8	1961	129.5	. .	471
1962 . . .	274.5	4,394.6	86.3	593.2	1,076.9	1962	129.8	. .	469
1963 . . .	291.0	4,795.2	87.7	610.2	1,140.7	1963	133.0	. .	472
1964 . . .	327.7	5,270.0	96.7	685.8	1,323.9	1964	140.4	. .	483
1965 . . .	400.1	5,896.8	112.7	823.0	1,555.9	1965	144.3	. .	502
1966 . . .	443.9	6,251.9	112.8	869.9	1,681.2	1966	152.4	. .	517
1967 . . .	515.5	6,877.0	111.9	914.8	1,745.4	1967	159.3	. .	534
1968 . . .	568.1	7,430.9	120.2	1,022.8	1,914.3	1968	173.4	. .	548
1969 . . .	(*g*)749.2	(*g*)7,468.5	130.7	1,182.1	2,195.4	1969	183.6	. .	564
1970 . . .	(*g*)1,042.6	(*g*)8,277.8	142.2	1,379.4	2,556.7	1970	191.9	. .	586
1971 . . .	(*g*)1,289.5	(*h*)n.a.	142.1	1,478.9	2,815.6	1971	218.0	. .	621
1972 . . .	(*g*)1,428.3	(*g*)9,696.6	143.8	1,628.7	3,132.4	1972	239.8	. .	658
1973 . . .	(*g*)1,597.3	(*g*)10,725.9	150.6	1,845.5	3,542.4	1973	275.1	. .	720
1974 . . .	(*g*)1,996.1	(*g*)13,149.1	150.0	2,143.0	4,214.9	1974	373.8	. .	829
1975 . . .	(*g*)2,669.1	(*g*)15,231.6	141.1	2,454.2	4,713.3	1975	416.8	. .	954
1976 . . .	(*g*)3,049.7	(*g*)16,921.0	132.0	2,808.6	5,595.0	1976	478.1	104.3	1,083
1977 . . .	(*g*)3,548.2	(*g*)19,234.3	144.8	3,635.1	6,445.5	1977	526.8	114.5	1,216
1978 . . .	(*g*)3,905.0	(*g*)20,236.3	128.9	3,595.7	6,510.0	1978	569.9	123.3	1,313
1979 . . .	(*g*)3,875.1	(*g*)22,230.1	117.1	3,529.7	6,946.4	1979	597.7	129.9	1,432
1980 . . .	(*g*)4,406.9	(*g*)25,614.0	129.3	4,174.9	8,018.2	1980	662.5	*r*144.8	1,578
1981 . . .	(*g*)5,608.6	(*g*)28,531.1	135.9	4,875.8	10,026.3	1981	765.4	*r*166.6	1,731
1982 . . .	(*g*)28,505.5	31,377.7	138.3	5,808.2	11,036.5	1982		184.8	1,923
1983 . . .	(*h*)	(*h*)	115.3	5,165.1	9,840.7				

(*a*) Series commenced 1945 46. Partly estimated before July 1951, and excludes Northern Territory before July 1954. (*b*) Building by private contractors, government authorities and owner builders. (*c*) At 31 December, Base; year 1954=100, weighted average for 'wage' earners only. Excludes rural industry. Series replaced by Award Rates of Pay Indexes from September 1982. (*d*) At 31 December. Base: June 1976=100.0. Excludes ASIC Division A—Agriculture, forestry, fishing and hunting; ASIC sub-division 72 Defence forces and ASIC sub-division 94—Private households employing staff. This series shows index numbers for both wage and salary earners (i.e. all employees). (*e*) Base; year 1911=100. The index numbers are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946 47, the 'C' Series Retail Price Index; from 1946 47 to 1948 49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948 49 onwards, the Consumer Price Index. (*f*) Year ended previous December. (*g*) Value added from 1968 69. (*h*) Manufacturing census was not conducted. (*i*) November.

TRANSPORT AND COMMUNICATION

SHIPPING

Year ended 30 June—	Vessels on overseas voyages: Arrivals: No.	Arrivals: Net tonnage	Departures: No.	Departures: Net tonnage	Overseas cargo: Discharged	Overseas cargo: Loaded
		mil. tons		mil. tons	mil. revenue tonnes(c)	mil. revenue tonnes(c)
1902	(a)	(a)	(a)	(a)	n.a.	n.a.
1912(b)	2,081	5.0	2,093	5.0	n.a.	n.a.
1922	1,567	4.6	1,544	4.5	2.4	5.8
1932	1,519	5.7	1,538	5.7	3.1	6.8
1942	1,276	5.2	1,268	5.6	5.8	4.4
1952	2,038	9.0	2,098	9.3	15.2	6.0
1958	2,656	12.4	2,598	12.1	17.2	9.2
1959	2,706	12.9	2,757	13.1	17.5	10.5
1960	2,976	14.5	2,969	14.4	19.4	12.0
1961	3,382	17.3	3,396	17.0	21.8	15.8
1962	3,599	18.9	3,611	18.8	20.9	19.3
1963	3,411	19.0	3,351	18.6	23.6	17.5
1964	3,714	20.7	3,763	20.9	25.6	22.2
1965	3,813	21.7	3,788	21.7	28.6	23.0
1966	3,929	23.0	4,029	23.3	29.2	24.4
1967	3,977	27.4	4,017	27.6	32.2	35.4
1968	3,972	30.1	4,013	30.3	33.3	44.4
1969	4,390	36.4	4,360	36.2	35.7	58.1
1970	4,971	44.5	5,053	44.6	34.5	80.5
1971	5,476	50.8	5,578	51.4	27.5	104.8
1972	5,439	53.1	5,447	53.5	25.4	111.2
1973	5,647	62.6	5,631	62.0	26.3	135.9
1974	5,975	72.0	5,909	71.5	30.7	153.6
1975	6,230	80.3	5,254	80.3	29.9	167.8
1976	5,772	75.0	5,824	75.4	26.9	158.6
1977	5,830	79.7	5,823	79.5	28.4	167.1
1978	5,615	80.2	5,668	80.4	27.0	166.7
1979	5,677	82.8	5,655	82.5	28.7	167.3
1980	6,249	(d)247.2	6,168	(d)246.6	31.0	188.7
1981	5,995	237.2	5,922	234.6	32.5	179.4
1982	5,895	234.0	5,838	236.7	31.4	177.0

(a) Separate details not available. Total entrances and clearances for year ended December 1901, 4,028 vessels, 6.5 million tons. (b) Year ended previous December. (c) Tons weight plus tons measurement. (d) Net tonnage replaced by dead weight tonnage as from July 1, 1979.

GOVERNMENT RAILWAYS (a)

Year ended 30 June—	Route kilometres (b)	Train kilometres	Passenger journeys	Freight-tonnes carried	Freight net tonne-kilometres
	'000	mil.	mil.	mil.	mil.
1902	20.6	61.5	115	15.7	n.a.
1912	27.0	88.8	228	25.9	n.a.
1922	37.7	90.3	335	32.0	n.a.
1932	43.5	102.7	303	26.5	n.a.
1942	43.8	142.4	475	39.5	n.a.
1952	43.1	150.3	501	45.0	11,046
1958	42.5	145.3	494	46.0	11,132
1959	42.3	146.9	485	48.8	11,970
1960	42.2	140.2	479	52.0	13,091
1961	42.0	149.7	463	56.3	14,370
1962	41.2	149.0	461	56.5	14,427
1963	41.0	149.6	465	56.8	15,131
1964	40.5	155.3	471	62.7	17,170
1965	40.3	155.5	464	65.9	18,224
1966	40.2	151.7	460	65.5	18,050
1967	40.3	150.8	455	69.6	18,832
1968	40.5	152.1	453	72.2	20,054
1969	40.4	151.0	447	77.0	21,463
1970	40.3	156.3	450	83.7	23,973
1971	40.3	156.3	453	87.3	25,206
1972	40.3	153.7	404	88.7	25,403
1973	40.5	152.0	372	92.5	26,582
1974	40.4	151.2	373	97.0	28,329
1975	40.6	150.6	361	103.5	29,792
1976	40.8	150.1	338	104.4	30,809
1977	40.1	151.1	332	109.9	31,995
1978	39.7	148.8	323	107.3	31,837
1979	39.4	147.5	375	111.1	32,056
1980	39.5	150.9	401	125.7	36,366
1981	39.1	147.1	412	127.3	36,468
1982	38.9	150.5	412	127.3	37,332

REGULAR INTERNAL AIR SERVICES

Year ended 30 June—	Kilometres flown	Passengers: Embarkations	Passengers: Passenger kilometres	Freight: Tonnes uplifted	Freight: Tonne-kilometres	Mail: Tonnes uplifted	Mail: Tonne-kilometres
	mil.	'000	mil.	'000	mil.	'000	mil.
1902	. .	. .	. .	. .	. .	. .	. .
1912	. .	. .	. .	. .	. .	. .	. .
1922	. .	. .	. .	. .	. .	. .	. .
1932	1.4	6	5	–	n.a.		n.a.
1942	12.6	151	122	1.2	1.5	n.a.	0.7
1952	67.3	1,829	1,162	52.2	39.0	2.4	1.9
1958	65.2	2,123	1,447	63.5	48.2	2.4	2.0
1959	64.9	2,235	1,519	57.0	42.0	2.4	2.2
1960	69.5	2,660	1,823	59.3	42.6	4.4	3.8
1961	68.1	2,639	1,786	57.2	41.2	5.4	4.5
1962	66.3	2,666	1,802	51.9	38.1	5.7	4.7
1963	70.3	2,833	1,965	53.9	41.3	5.9	4.9
1964	78.8	3,257	2,266	57.3	44.5	6.4	5.5
1965	84.2	3,764	2,638	63.5	49.5	7.0	5.9
1966	88.5	4,158	2,947	69.0	54.9	7.8	6.7
1967	91.3	4,425	3,174	74.4	58.6	8.7	7.5
1968	91.3	4,668	3,420	77.2	61.8	8.5	7.6
1969	97.1	5,185	3,865	81.6	66.5	9.0	8.0
1970	106.6	5,911	4,511	90.8	74.5	9.6	8.7
1971	114.6	6,340	4,974	91.4	78.0	9.9	9.3
1972	113.0	6,629	5,134	89.9	74.2	10.1	9.3
1973	118.6	7,503	5,685	94.4	81.5	10.1	9.8
1974	131.8	8,858	6,812	112.7	98.3	9.9	9.3
1975	135.5	9,393	7,374	107.8	97.9	9.6	9.0
1976	130.1	9,315	7,281	106.1	97.5	9.7	9.1
1977	122.9	9,349	7,330	108.1	96.3	9.6	9.1
1978	134.7	10,289	8,181	120.9	106.5	11.3	10.7
1979	135.4	10,724	8,619	127.5	110.7	13.1	12.5
1980	138.2	11,505	9,486	129.8	109.6	15.1	14.2
1981	137.3	11,381	9,747	125.0	107.9	r17.3	16.4
1982	136.8	11,397	10,155	136.3	117.9	16.8	16.5

(a) Particulars of train-kilometres, passenger journeys, freight tonnes carried, and freight net tonne-kilometres refer only to operations for which revenue is received. (b) At end of period.

TRANSPORT AND COMMUNICATION—*continued*

ROAD TRANSPORT COMMUNICATION

	Tram trolley-bus and bus services(a)	Motor vehicles on the register					Telephones			Broadcasting and television licences in force(b)	
Year ended 30 June—	Passenger journeys	Motor cars and station wagons	Commercial vehicles (c)	Motor cycles	Total motor vehicles (including motor cycles)	Postal matter dealt with(d)	Instruments in service (b)	Services in operation (b)(e)	Telegrams (f)	Broadcast listeners'	Television viewers'
	mil.	'000	'000	'000	'000	mil. articles	'000	'000	mil.	'000	'000
1902	n.a.	..	..	..	..	(g)384	(g)36	(g)28	(g)8.2	..	..
1912	360	n.a.	n.a.	n.a.	n.a.	(g)698	(g)118	(g)96	(g)13.9	..	..
1922	569		102	38	139	778	259	196	16.8	(h)1	..
1932	589	420	96	72	588	887	485	364	13.9	369	..
1942	(i)1,067	451	250	50	751	1,124	739	531	26.1	1,320	..
1952	1,019	1,028	588	155	1,770	1,482	1,301	939	29.8	1,961	..
1957	833	1,537	710	118	2,366	1,784	1,814	1,318	24.0	2,107	74
1958	803	1,661	731	114	2,506	1,895	1,937	1,407	22.9	2,138	291
1959	778	1,784	755	110	2,649	1,951	2,056	1,491	22.5	2,264	578
1960	758	1,938	784	102	2,824	1,953	2,164	1,562	22.2	2,283	955
1961	726	2,070	800	93	2,963	2,048	2,266	1,631	21.8	2,256	1,217
1962	718	2,201	815	85	3,101	2,101	2,382	1,719	21.6	2,220	1,424
1963	712	2,377	832	77	3,286	2,202	2,523	1,812	21.8	2,240	1,655
1964	702	2,583	846	69	3,498	2,342	2,670	1,919	23.4	2,302	1,882
1965	685	2,792	858	65	3,715	2,443	2,811	2,010	24.3	2,358	2,045
1966	653	2,947	868	64	3,878	2,556	2,978	2,120	25.0	2,526	2,226
1967	621	3,104	880	69	4,053	2,683	3,178	2,235	25.6	2,538	2,405
1968	609	3,305	892	83	4,279	2,648	3,392	2,359	(j)23.4	2,580	2,519
1969	590	3,499	911	98	4,508	2,648	3,599	2,511	(j)23.3	2,630	2,649
1970	575	3,720	938	114	4,772	2,664	3,913	2,704	(j)23.2	2,670	2,758
1971	561	3,935	961	144	5,039	2,685	4,152	2,857	(j)21.2	2,699	2,845
1972	503	4,141	996	180	5,317	2,649	4,400	2,978	(j)20.2	2,758	2,939
1973	521	4,362	1,041	210	5,613	2,691	4,659	3,147	(j)20.4	2,814	3,013
1974	533	4,604	1,090	259	5,953	2,656	5,000	3,361	(j)20.7	(k)2,851	(k)3,022
1975	531	4,859	1,140	278	6,277	2,516	5,267	3,539	(j)18.5	..	..
1976	515	5,073	1,215	293	6,581	2,209	5,502	3,700	(j)12.9	..	..
1977	514	5,243	1,280	296	6,818	2,198	5,835	3,907	(j)10.4	..	..
1978	516	5,462	1,360	292	7,115	2,304	6,181	4,166	9.0	..	..
1979	(l)459	5,657	1,413	288	7,358	2,505	6,677	4,449	7.1	..	..
1980	(l)456	r5,801	r1,462	r310	r7,573	2,631	7,153	4,743	5.4	..	..
1981	(l)448	6,021	1,544	352	7,918	2,767	7,684	5,069	5.1	..	..
1982	(l)447	6,294	1,662	391	8,346	2,877	8,055	5,357	4.5	..	..
1983	n.y.a.	n.y.a.	n.y.a	n.y.a.	n.y.a.	2,944	8,267	5,592	4.1	..	..

(a) Government and municipal trolley-bus services ceased in August 1969. (b) At end of period. (c) Open and closed light commercial type vehicles; utilities and panel vans, rigid and articulated trucks, other truck type vehicles and buses. (d) Letters, postcards, letter-cards, newspapers, packets, parcels, and registered articles. (e) All single lines plus one half the number of duplex lines. Until the introduction of duplex services in December 1948, statistics of exchange lines and telephone services were identical. (f) Telegrams despatched to places within Australia and despatched to or received from overseas. (g) Year ended previous December. (h) Year 1923 24. First year licences issued. (i) Tram passenger journeys only before 1942. (j) Excludes telegrams received from overseas. These particulars are no longer available. (k) Television viewer and broadcast listener's licences were abolished on 17 September 1974. (l) Excludes details for South Australia, which are no longer separately identifiable from the railway operations of the State Transport Authority.

PRIVATE FINANCE

NOTE ISSUE — BANKING

June—	Australian notes on issue (a)	*Trading banks*		Debits to customers' accounts(b)	*Savings banks*
		Advances (b)	Deposits (b)		Depositors' balances(c)
	$m	$m	$m	$m	$m
1958	775	2,060	3,240	1,284	2,594
1959	790	2,007	3,362	1,432	2,783
1960	843	2,211	3,611	1,737	3,045
1961	839	2,238	3,600	1,654	3,155
1962	856	2,287	3,837	1,848	3,470
1963	869	2,465	4,064	2,028	3,940
1964	870	2,610	4,649	2,318	4,476
1965	862	2,955	5,038	2,653	4,887
1966	849	3,183	5,308	2,660	5,254
1967	938	3,548	5,614	2,964	5,765
1968	1,006	4,020	6,087	3,572	6,222
1969	1,107	4,384	6,706	4,035	6,707
1970	1,216	4,903	7,099	4,861	7,105
1971	1,369	5,317	7,431	5,668	7,635
1972	1,499	5,876	8,322	6,146	8,391
1973	1,758	7,755	11,013	8,035	10,238
1974	2,146	10,120	12,714	8,988	11,196
1975	2,557	11,205	14,937	10,095	(e)12,869
1976	2,921	12,576	16,955	13,368	14,823
1977	3,291	14,006	19,089	14,879	16,365
1978	3,670	15,683	19,746	17,624	18,046
1979	4,107	17,653	22,179	20,555	19,832
1980	4,586	20,386	25,643	24,730	21,261
1981	5,187	22,998	29,306	28,334	23,218
1982	5,837	(d)26,213	33,503	41,081	25,047
1983	6,362	28,649	36,044	42,417	30,006

(*a*) Last Wednesday in June. (*b*) Weekly average for month of June. (*c*) End of June. (*d*) Break in series due to a change in accounting procedures. The figure for June 1981 on the new basis is $23,071 million. (*e*) From June 1975 break in series due to a change in accounting procedures by one bank.

PUBLIC FINANCE

COMMONWEALTH GOVERNMENT — STATE — ALL PUBLIC AUTHORITIES

Year ended 30 June	*Consolidated revenue fund*		Taxation collections	*Consolidated revenue fund*		Taxation collections	Government Final Consumption Expenditure	Public Gross Fixed Capital Expenditure(b)
	Revenue	Expenditure		Revenue	Expenditure			
	$m	$m	$m	$m	$m	$m	$m	$m
1902	23	8	18	56	58	5	..	..
1912	41	29	32	83	82	11	..	..
1922	128	128	99	170	175	36	..	..
1932	143	143	109	199	242	65	..	..
1942	420	420	362	305	299	115	..	..
1952	2,034	2,034	1,848	777	783	126	803	806
1957	2,624	2,624	2,208	1,154	1,168	229	1,086	950
1958	2,648	2,648	2,338	1,210	1,224	256	1,121	998
1959	2,592	2,592	2,283	1,280	1,295	276	1,210	1,100
1960	2,877	2,877	2,519	1,399	1,404	320	1,319	1,214
1961	3,277	3,277	2,871	1,511	1,513	335	1,430	1,256
1962	3,283	3,283	2,858	1,609	1,617	394	1,528	1,380
1963	3,371	3,371	2,907	1,694	1,696	438	1,628	1,434
1964	3,809	3,809	3,247	1,829	1,829	496	1,827	1,586
1965	4,418	4,418	3,819	1,947	1,965	549	2,060	1,852
1966	4,879	4,879	4,221	2,094	2,119	591	2,335	2,066
1967	5,228	5,288	4,492	2,286	2,289	664	2,734	2,184
1968	5,760	5,760	4,952	2,463	2,468	753	3,112	2,369
1969	6,086	6,086	5,528	2,689	2,700	861	3,402	2,525
1970	6,979	6,979	6,380	3,010	3,028	962	3,683	2,757
1971	7,838	7,838	7,183	3,457	3,483	1,010	4,212	2,943
1972	8,688	8,688	7,939	4,035	4,050	1,414	4,800	3,299
1973	9,278	9,278	8,470	4,675	4,704	1,781	5,468	3,421
1974	11,976	11,976	10,917	5,481	5,514	Y,207	6,690	3,926
1975	15,391	15,391	14,211	7,109	7,187	2,792	9,229	5,566
1976	19,713	19,713	16,938	8,536	8,498	3,470	11,523	6,607
1977	21,436	21,436	19,806	9,796	9,790	3,973	13,488	7,011
1978	23,455	23,455	21,494	10,895	10,925	4,301	15,270	7,807
1979	25,484	25,484	23,466	(d)12,177	(d)12,172	(d)4,667	16,712	8,697
1980	29,627	29,627	27,548	(d)14,008	(d)13,954	(d)5,264	18,936	8,730
1981	35,052	35,052	32,714	(d)16,095	(d)16,150	(d)6,047	22,115	10,051
1982	40,593	40,593	37,991	(d)19,742	(d)19,799	(d)7,099	25,057	11,544

(*a*) At 30 June. Expressed in Australian currency equivalents at ruling rates of exchange. (*b*) Includes General Government, Public trading enterprises and Public financial enterprises. (*d*) Includes Northern Territory.

OVERSEAS TRADE

	TOTALS		PRINCIPAL EXPORTS					
Year ended 30 June—	*Imports*	*Exports*	*Coal(a)*	*Wool*(b)	*Barley*	*Wheat*	*Petroleum products*	*Flour(c)*
	$m	$m	$m	$m	$m	$m	$m	$m
1902(*g*)	76	100	n.a.	30	n.a.	6	n.a.	n.a.
1912(*g*)	122	158	2	52	–	13	–	3
1922	188	256	2	96	1	57	–	11
1932	104	216	1	74	3	38	–	8
1942	348	338	1	112	–	9	–	8
1952	2,107	1,350	1	636	22	111	–	66
1958	1,584	1,636	7	720	19	57	11	29
1959	1,593	1,623	5	578	34	77	15	26
1960	1,854	1,875	9	742	23	123	21	30
1961	2,175	1,938	15	649	29	205	24	38
1962	1,769	2,155	27	720	30	285	25	35
1963	2,163	2,152	22	733	10	217	29	31
1964	2,373	2,782	32	926	18	362	20	42
1965	2,905	2,651	51	781	18	297	11	37
1966	2,939	2,721	63	757	12	264	9	25
1967	3,045	3,024	72	840	22	361	30	23
1968	3,264	3,045	85	739	7	343	33	24
1969	3,469	3,374	117	827	18	258	26	22
1970	3,881	4,137	164	803	23	338	27	21
1971	4,150	4,376	195	593	51	433	38	20
1972	4,008	4,893	238	633	73	419	45	13
1973	4,121	6,214	291	1,262	39	273	41	12
1974	6,085	6,914	348	1,248	68	517	95	20
1975	8,083	8,673	721	815	187	1,028	145	49
1976	8,240	9,601	1,063	1,032	201	922	144	39
1977	10,411	11,646	1,282	1,587	223	863	190	26
1978	11,167	12,270	1,482	1,289	122	1,011	223	21
1979	13,752	14,243	1,524	1,592	148	794	295	14
1980	16,218	18,870	1,675	1,738	354	2,177	427	12
1981	18,965	19,177	1,967	1,845	243	1,729	517	15
1982	23,005	19,575	2,289	1,913	241	1,720	551	14
1983*p*	21,810	22,205	3,070	1,881	135	1,343	1,304	14

PRINCIPAL EXPORTS—*continued*

							Ores and concentrates	
Year ended 30 June—	*Butter(d)*	*Hides and skins*	*Meats*	*Fruit(e)*	*Sugar*	*Lead and lead alloys unworked (f)*	*Iron*	*Other*
	$m	$m	$m	$m	$m	$m	$m	$m
1902(*g*)	3	3	5	–	–	n.a.	–	–
1912(*g*)	9	6	9	1	–	3	–	8
1922	16	6	11	6	–	4	–	1
1932	21	5	13	10	5	5	–	–
1942	16	12	28	11	5	14	–	2
1952	10	34	71	44	14	52	–	40
1958	32	51	111	72	70	43	–	42
1959	51	47	194	73	64	38	–	33
1960	58	64	177	64	53	33	–	44
1961	41	54	145	61	70	33	–	54
1962	49	64	179	74	68	38	–	48
1963	49	74	226	73	91	35	–	44
1964	57	92	244	92	157	50	–	54
1965	67	80	286	86	113	61	1	77
1966	58	89	228	107	94	67	3	88
1967	65	86	286	95	100	54	46	100
1968	47	62	285	105	98	63	103	123
1969	41	75	291	92	122	66	180	143
1970	53	88	426	88	116	106	278	205
1971	48	71	438	100	150	30	374	231
1972	49	80	569	89	211	68	376	226
1973	62	189	867	117	250	83	439	239
1974	42	148	801	105	223	121	499	309
1975	34	102	450	91	645	130	707	423
1976	64	142	679	96	570	111	771	528
1977	38	239	896	99	637	166	902	674
1978	44	244	1,128	115	537	194	921	701
1979	49	351	1,722	141	448	260	968	727
1980	39	355	1,738	188	667	548	1,076	1,092
1981	30	191	1,594	209	1,146	321	1,117	1,965
1982	19	109	1,292	175	764	264	1,252	2,131
1983*p*	41	134	1,585	201	557	302	1,493	2,206

(*a*) Anthracite, bituminous and sub-bituminous (except briquettes). (*b*) Includes greasy wool, slipe, wool scoured and carbonised, wool exported on skins. (*c*) Flour, plain white. (*d*) Includes concentrates and ghee. (*e*) Includes juices and fruit preparations. (*f*) Includes silverlead. (*g*) Year ended previous December.

OVERSEAS TRADE—*continued*

PRINCIPAL IMPORTS

Year ended 30 June—	*Vegetable foodstuffs, etc.*	*Apparel, etc.*	*Oil, etc.*	*Metals, etc.*	*Rubber*	*Paper, etc.*
	$m	$m	$m	$m	$m	$m
1902(*a*)	7.2	21.8	2.4	15.6	1.0	3.2
1912(*a*)	7.4	32.4	3.2	28.0	2.8	5.2
1922	8.0	62.0	9.4	45.6	3.4	8.8
1932	5.2	30.8	11.0	14.8	1.6	8.8
1942	12.3	65.3	32.4	143.6	6.0	8.7
1952	50.1	407.1	174.9	768.8	68.0	137.5
1956	44.1	222.7	199.3	644.1	44.1	87.2
1957	51.6	182.7	191.1	530.1	33.4	83.5
1958	51.5	217.0	203.4	564.4	33.3	89.8
1959	55.3	193.9	209.0	585.6	33.6	96.1
1960	54.9	222.1	213.5	710.1	48.5	103.8
1961	60.5	264.9	223.3	871.3	47.3	133.8
1962	56.3	208.4	219.8	630.3	35.5	109.6
1963	55.5	233.3	246.3	850.0	46.7	133.5
1964	61.6	234.0	251.5	947.1	51.2	141.7
1965	66.2	272.1	260.1	1,275.2	66.3	156.5

Year ended 30 June—	*Food and live animals*	*Beverages and tobacco*	*Crude materials, inedible, except fuels*	*Mineral fuels, lubricants and related materials*	*Animal and vegetable oils and fats*	*Chemicals*	*Manufactured goods classified chiefly by materials*	*Machinery and transport equipment*	*Miscellaneous manufactured articles*	*Commodities and transactions of merchandise trade not elsewhere classified*
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
1967	118	38	206	247	15	297	586	1,144	243	110
1968	117	36	224	241	14	309	644	1,250	270	111
1969	128	44	228	252	13	328	688	1,328	298	116
1970	140	48	247	255	16	363	753	1,528	350	124
1971	158	50	235	190	18	410	867	1,644	403	125
1972	160	51	219	194	15	410	856	1,483	432	137
1973	163	52	268	175	13	424	893	1,489	475	119
1974	237	65	415	377	28	580	1,404	2,091	721	108
1975	302	75	390	724	43	786	1,496	3,059	961	125
1976	275	90	387	807	42	709	1,460	3,177	1,045	160
1977	455	99	471	996	54	926	1,891	3,980	1,354	105
1978	531	122	477	1,157	66	1,009	1,993	4,118	1,484	124
1979(*b*)	533	131	562	1,140	66	1,201	2,408	5,731	1,742	125
1980	655	142	700	2,098	81	1,579	2,900	5,656	2,005	226
1981	655	169	764	2,726	63	1,583	3,263	7,032	2,264	271
1982	732	173	769	3,002	80	1,828	3,856	9,357	2,681	291
1983	836	184	647	3,091	81	1,778	3,445	8,021	2,731	457

(*a*) Year ended previous December. (*b*) From 1 July 1978, imports have been classified according to the new A.I.C.C. which is based on the Standard International Trade Classification, Revision 2. The figures for 1979 on, are therefore not comparable to those for previous years.

NATIONAL ACCOUNTS

GROSS DOMESTIC PRODUCT (*a*)

Year—	*At current prices* (*c*)	*At constant prices* *1959–60 prices* (*b*)	*1966–67 prices* (*b*)	*1974–75 prices* (*b*)	*1979–80 prices* (*c*)
	$m	$m	$m	$m	
1960–61	14,617	14,177	16,950	..	..
1961–62	14,968	14,337	17,152	..	..
1962–63	16,182	15,278	18,327	..	..
1963–64	17,971	16,437	19,631	..	..
1964–65	19,769	17,678	21,007	..	..
1965–66	20,770	17,933	21,457	..	..
1966–67	22,868	19,134	22,868	42,401	..
1967–68	24,411	..	23,788	43,915	..
1968–69	27,562	..	25,930	48,114	..
1969–70	30,545	..	27,531	50,829	83,305
1970–71	33,737	..	28,786	53,381	87,746
1971–72	37,680	..	30,091	55,900	92,232
1972–73	42,907	..	31,528	57,969	95,929
1973–74	51,366	..	33,050	60,849	100,168
1974–75	61,773	..	33,440	61,773	101,726
1975–76	72,826	..	..	63,364	104,273
1976–77	83,165	..	..	65,301	107,124
1977–78	90,340	..	..	65,593	108,090
1978–79	102,163	..	..	68,514	113,366
1979–80	114,757	..	..	69,868	114,757
1980–81	130,817	..	..	..	118,916
1981–82	147,938	..	..	..	121,890
1982–83	160,892	..	..	..	119,412

(*a*) For a description of the conceptual basis of these estimates, *see Australian National Accounts, Concepts, Sources and Methods* (5216.0). (*b*) *Australian National Accounts National Income and Expenditure*, 1981–82, (5204.0). (*c*) These figures are consistent with those published in *Quarterly Estimates of National Income and Expenditure, Australia, June Quarter 1983* (5206.0).

GROSS FIXED CAPITAL EXPENDITURE (*a*)

Year—	*At current prices* (*c*)	*At constant prices* *1953–54 prices*(*b*)	*1959–60 prices*(*b*)	*1966–67 prices*(*b*)	*1974–75 prices*(*b*)	*1979–80 prices*(*c*)
	$m	$m	$m	$m	$m	$m
1960–61	3,671	..	3,569	4,159	..	..
1961–62	3,708	..	3,558	4,150	..	..
1962–63	4,014	..	3,837	4,465	..	..
1963–64	4,499	..	4,227	4,916	..	..
1964–65	5,250	..	4,789	5,559	..	..
1965–66	5,723	..	5,077	5,910	..	..
1966–67	6,009	..	5,159	6,009	11,104	..
1967–68	6,533	..	..	6,351	11,782	..
1968–69	7,255	..	..	6,810	12,662	..
1969–70	7,906	..	..	7,112	13,314	22,623
1970–71	8,773	..	..	7,434	14,047	23,731
1971–72	9,625	..	..	7,637	14,373	24,310
1972–73	10,168	..	..	7,584	14,267	24,025
1973–74	11,744	..	..	7,800	14,514	24,537
1974–75	14,189	..	..	7,666	14,189	23,792
1975–76	17,030	..	..	..	14,730	24,673
1976–77	18,954	..	..	..	14,604	24,563
1977–78	20,615	..	..	..	14,513	24,482
1978–79	23,185	..	..	..	15,195	25,574
1979–80	25,483	..	..	..	15,062	25,483
1980–81	31,829	..	..	..	..	28,600
1981–82	37,828	..	..	..	..	30,723
1982–83	38,034	..	..	..	..	27,530

For footnotes see the above table.

INTERNATIONAL STATISTICS

(Source: *United Nations Demographic Year Book*, 1981)

POPULATION ESTIMATES: SELECTED COUNTRIES: MID YEAR (Millions)

	1972	*1974*	*1976*	*1978*	*1980*	*1981*
Argentina	24.39	25.05	27.72	26.39	27.06	28.08
Australia	13.18	13.60	13.92	14.25	14.62	14.86
Canada	21.82	22.40	23.03	23.49	23.96	24.21
China	854.21	881.99	942.80	969.61	999.91	1007.76
France	51.70	52.49	52.89	53.28	53.71	53.96
South Africa . . .	23.67	24.92	26.13	27.68	29.29	30.13
United States . . .	209.90	213.85	218.04	225.06	227.61	229.81
U.S.S.R.	247.50	252.21	256.76	261.25	265.54	267.70

POPULATION OF SELECTED CAPITAL CITIES

City proper		*Population*	*City proper*		*Population*
Beijeng (Peking)	(1970)	7,570,000	Moscow	(1981)	8,203,000
Bonn	(1980)	288,200	New Delhi	(1971)	301,900
Buenos Aires	(1980)	2,985,000	New York	(1980)	7,072,700
Cairo	(1976)	5,074,100	Ottawa	(1980)	305,000
Canberra	(1982)	229,700	Paris	(1975)	2,317,300
Lagos	(1975)	1,060,900	Rome	(1980)	2,914,100
London	(1980)	6,849,000	Tokyo	(1980)	8,349,300
Manila	(1975)	1,479,200	Washington	(1980)	638,400
Mexico City	(1979)	9,191,300	Wellington	(1980)	135,000

SELECTED COUNTRIES: EXPECTATION OF LIFE AT SPECIFIED AGES FOR EACH SEX: LATEST AVAILABLE YEARS

	Age in years				
Country	*0*	*20*	*40*	*60*	*80*
Australia—					
1979					
Male	70.79	52.42	33.76	17.06	6.27
Female	77.76	59.01	39.66	21.78	7.83
China—					
1975–1980					
Male	62.10	n.a.	n.a.	n.a.	n.a.
Female	65.90	n.a.	n.a.	n.a.	n.a.
India—					
1961–1976					
Male	46.40	41.10	25.90	13.60	6.00
Female	44.70	39.90	25.40	13.80	6.00
Japan—					
1980					
Male	73.32	54.53	35.49	22.32	8.27
Female	78.83	59.73	40.30	26.37	10.31
Nigeria—					
1975–1980					
Male	45.90	n.a.	n.a.	n.a.	n.a.
Female	49.20	n.a.	n.a.	n.a.	n.a.
U.S.S.R.—					
1971–1972					
Male	68.00	n.a.	n.a.	n.a.	n.a.
Female	76.00	n.a.	n.a.	n.a.	n.a.

DIVORCE AND CRUDE DIVORCE RATES: SELECTED COUNTRIES: 1979–1981

	Number of Divorces			*Crude Divorce Rate**		
Country	*1979*	*1980*	*1981*	*1979*	*1980*	*1981*
Australia	34,854	39,258	41,412	2.6	2.7	2.8
Canada	59,474	62,019	n.a.	2.51	2.59	n.a.
Italy	10,799	12,037	11,109	0.19	0.21	0.19
Japan	135,250	141,689	154,000	1.17	1.21	1.31
Sweden	20,322	19,887	20,160	2.45	2.39	2.42
U.K. (England and Wales)	137,868	148,301	n.a.	2.80	3.01	n.a.
United States	1,181,000	1,182,000	1,219,000	5.36	5.19	5.30
U.S.S.R.	951,161	929,616	931,000	3.61	3.50	3.48

* Rates are the number of final divorces granted under civil law per 1,000 mid-year population.

LIST OF SPECIAL ARTICLES AND MISCELLANEOUS MATTER CONTAINED IN PREVIOUS ISSUES

This list refers to special articles and other more or less important miscellaneous matter which have appeared in previous issues of the Year Book but which are not included, or are included in abbreviated form only, in the present issue.

The figures below indicate, respectively, the number and page of the Year Book to which reference is made. In cases where matter was published in more than one previous issue, the volume and page for the last issue containing such matter are given. For possible revisions, however, issues immediately following the one referred to should also be consulted.

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APPENDIX

CHAPTER 3 GENERAL GOVERNMENT

Some recent information which has come to hand since Chapter 3 was sent to press is given below:

NATIONAL ANTHEM AND COLOURS OF AUSTRALIA

His Excellency, the Governor-General of the Commonwealth of Australia, issued the following Proclamation on 19 April 1984:

> I, SIR NINIAN MARTIN STEPHEN, Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, hereby declare:
>
> (a) that the anthem "God Save The Queen" shall henceforth be known as the Royal Anthem and be used in the presence of Her Majesty The Queen or a member of the Royal Family;
>
> (b) that the National Anthem shall consist of the tune known as "Advance Australia Fair" with the following words:
>
> Australians all let us rejoice,
> For we are young and free;
> We've golden soil and wealth for toil;
> Our home is girt by sea;
> Our land abounds in nature's gifts
> Of beauty rich and rare;
> In history's page, let every stage
> Advance Australia Fair.
> In joyful strains then let us sing,
> Advance Australia Fair.
>
> Beneath our radiant Southern Cross
> We'll toil with hearts and hands;
> To make this Commonwealth of ours
> Renowned of all the lands;
> For those who've come across the seas
> We've boundless plains to share;
> With courage let us all combine
> To Advance Australia Fair.
> In joyful strains then let us sing,
> Advance Australia Fair.
>
> (c) that the Vice-Regal Salute to be used in the presence of His Excellency The Governor-General shall consist of the first four bars and the last four bars of the tune known as "Advance Australia Fair";
>
> (d) that the National Anthem shall be used on all official and ceremonial occasions, other than occasions on which either the Royal Anthem or the Vice-Regal Salute is used; and
>
> (e) that green and gold (Pantone Matching System numbers 116C and 348C as used for printing on paper) shall be the national colours of Australia for use on all occasions on which such colours are customarily used.

COMMONWEALTH AND STATE LEADERS OF THE GOVERNMENT, page 42

Amended to June 1984

Queensland—The Hon. Sir Johannes Bjelke-Peterson, K.C.M.G., M.L.A. (N.P.)

THE FIRST HAWKE MINISTRY—AT SEPTEMBER 1983, page 42

Amended to June 1984

**Special Minister of State, Vice-President of the Executive Council and Leader of the House*—
THE HON. M. J. YOUNG, M.P. (S.A.)

**Minister for Aviation and Minister Assisting the Minister for Defence*—
THE HON. K. C. BEAZLEY, M.P. (W.A.)

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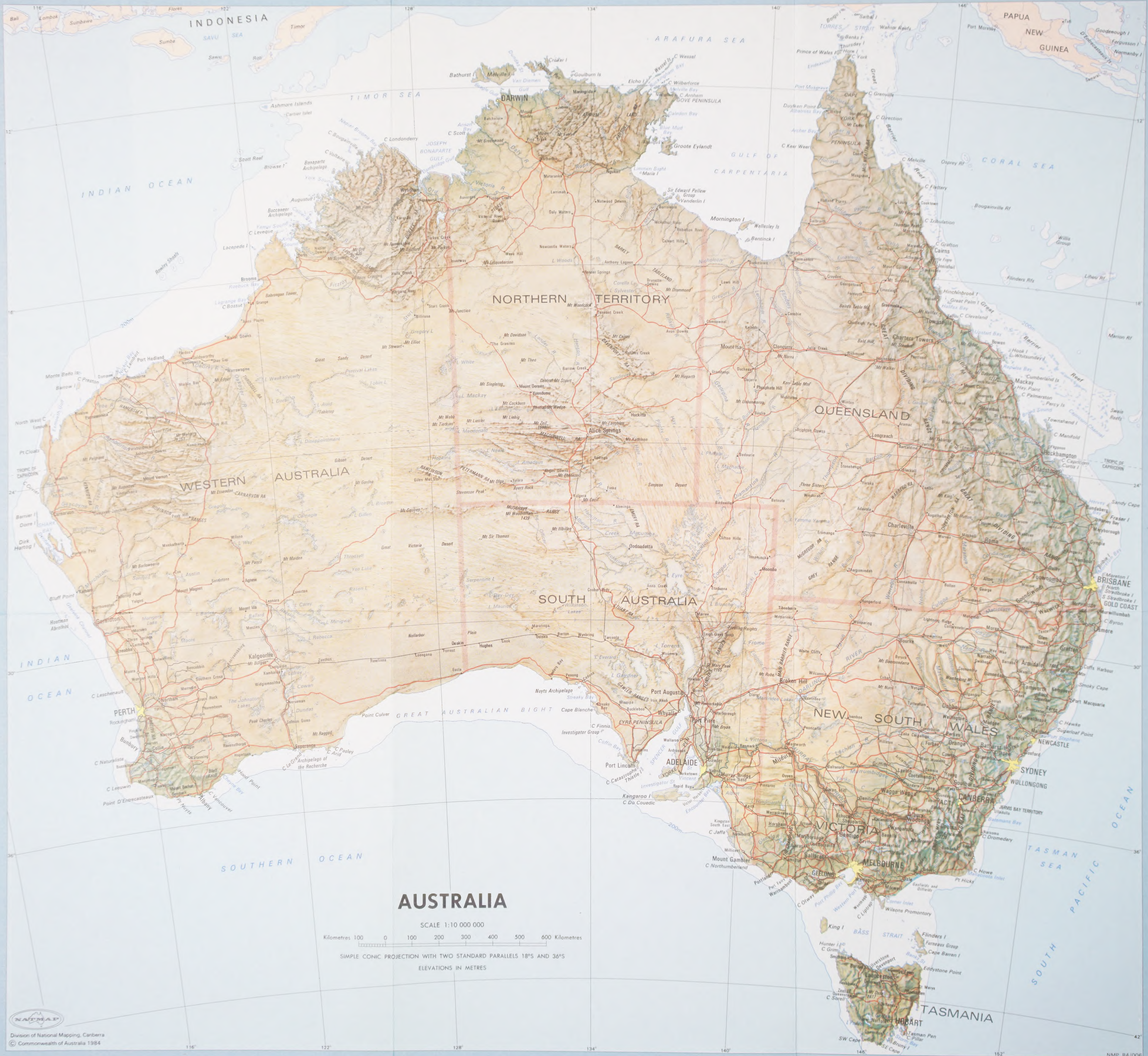
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Simpson Desert
Nullarbor Plain
L. Eyre
L. Torrens
L. Gairdner
L. Frome
MACDONNELL RA
MUSGRAVE RANGES
FLINDERS RANGES
GREAT DIVIDING RANGE
Great Barrier Reef
King I
Kangaroo I
Tropic of Capricorn
200m
116°
122°
128°
134°
140°
146°
152°
12°
18°
24°
30°
36°
42°

AUSTRALIA

SCALE 1:10 000 000

Kilometres 100 0 100 200 300 400 500 600 Kilometres

SIMPLE CONIC PROJECTION WITH TWO STANDARD PARALLELS 18°S AND 36°S

ELEVATIONS IN METRES

NATMAP
Division of National Mapping, Canberra
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